

*Southern California
Camellia Society
The Camellia Review*

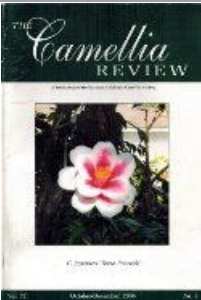
BRADFORD KING ARTICLES


2006 – 2010



C. reticulata 'Jim Smelley'

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**December 2005 – March
2006**

Sick Bay

WHY WE TREASURE WHITE CAMELLIAS

Bradford King

There is something special about a perfect white camellia. Its pure bright white color reminds me of a bride's gown or freshly fallen snow or a tall glass of milk—memories of the sacred union of man and women, childhood days when school is closed due to snow and we played outside making snow angels and cold milk for dunking a cookie or washing down chocolate cake. Now as a camellia grower I am always in awe when I see one in the garden or in a show with no weather marks or petal plight. It is a major achievement to get an unblemished white bloom to a show. I think that is why there are camellia shows where a "Best White" camellia is awarded. Do you have a favorite? I have pondered and struggled with the notion of which is the best white camellia.

Historically, the first white camellia to come from China to the western world was 'Alba Plena'. Captain Conner brought this cultivar to England in 1792. The first *C. japonica* to arrive in the United States was a single red, imported from England to Hoboken, New Jersey by John Stevens. No one remembers this single red today; however, in 1800 John Stevens imported 'Alba Plena' from England and this white cultivar is still known throughout the camellia world. Stevens had nurseries in Manhattan and Harlem and was instrumental in New York become the center for greenhouse-grown camellias. Interest spread to the wealthy in Philadelphia, Baltimore, Washington and Boston. Only those well off financially could afford the necessary greenhouse facilities to grow camellias in the northeastern states. 'Alba Plena' was in these early collections and was distributed throughout the camellia-growing states.

In 1784 David Landreth founded the first seed company in

Philadelphia. He also sold camellias. In 1818 he opened a branch of his company in Charleston, South Carolina and introduced camellias to the southern states. From 1830 to 1860 thousands of camellias were sold to plantation owners for landscape purposes. Fruitland Nursery, established in Augusta Georgia in 1858, sold camellias until the property became the Augusta National Golf Club. As the cotton industry grew throughout the South so did the distribution of camellias. A good example is 'Alba Superba' which was introduced in 1840 by Magnolia Plantation in Charleston. This white medium semidouble traveled to the West and specimen can be found near the ornamental bell at the entrance to the Huntington Japanese Garden.

'Purity' early became a popular landscape white camellia. This rose form to formal double came from Japan in 1887. Descanso Gardens has a small forest of them because Manchester Boddy planned to use them for ladies' corsages. In 2009 the Southern California Camellia Society and the Pomona Valley Camellia Society established a new camellia show category of six Nuccio's introductions. It is an open class—treated and non-treated. I think an all white entry would be striking. We can chose from these Nuccio's introductions: 'Elegans Champagne', 'Junior Prom', 'Nuccio's Gem', 'Silver Anniversary', 'Silver Chalice', 'Silver Cloud', 'Silver Lace', 'Silver Tower', 'Silver Triumph', 'Silver Waves', 'Tata', 'Thomas D. Pitts' and 'White Bouquet'. Can't you see six large perfect white blooms winning?

On the national scene in 2009 the white japonica to win the most points in camellia shows was 'Man Size' with 130. 'Sea Foam' won 68, 'Melissa Ann' won 20 and 'Nuccio's

Gem' won14. 'Man Size', a miniature anemone flower is a favorite in Southern California; however, we rarely 'Sea Foam' or 'Melissa Ann' in Southern California shows. 'Sea Foam', a medium to large formal double, blooms mid to late season so it doesn't do well in Southern California when it often gets very hot in March and April. Although this eliminates it as a candidate for best white camellia in Southern California, it does well in northern California. 'Melissa Ann', a large to very large loose to full peony with clusters of yellow interspersed stamens, is very popular in the South where it was introduced in 1995. It is a great bloom, but is hard to find in Southern California nurseries.

So, which white camellia is best in Southern California? My nomination would be the creamy white miniature anemone 'Man Size' for best white miniature/small category. It wins often as a single and in trays of 3's and 5's. My candidate for the best medium white camellia is 'Nuccio's Gem'. This medium to large formal double with beautiful petals has been available for over 40 years. It is popular and available throughout the camellia world. The noted camellia artist, Paul Jones in the foreword to *The Illustrated Encyclopedia of Camellias* by Macoby said, "Having examined countless camellias at their best, I feel well qualified to nominate the perfect bloom and, in my opinion, perfection is exemplified in 'Nuccio's Gem'. Has a new white camellia come along since Paul Jones said this in 1997 that would dethrone 'Nuccio's Gem'?"

In my opinion 'Elegans Champagne' is the best large or very large white japonica. A sport of 'Elegans Splendor' it is a beautiful white anemone flower with creamy center petaloids and fimbriated outer petals. It blooms early to mid season on a bushy spreading plant. It is a complex flower that at times may show stamens especially when gibbed, but most of the time the stamens are not visible. It has heavily serrated leaves that are distinctive.

How do we determine which is the best white camellia? What do you think? I think familiarity, popularity and personal preferences are part of the choice of "best."

The golfer, Tiger Woods, was voted the best athlete of the decade by the Associated Press in December 2009 two weeks after his marital infidelities became public which resulted in his loss of face, endorsements and public flogging by the media. He won over the popular cyclist and cancer survivor Lance Armstrong, frequently accused but never convicted of using performance enhancing drugs, and the tennis great Roger Federer, who was almost perfect in center court wins until losing to his his nemesis Nadal. *Sports Illustrated* choose Roger Federer as the best athlete of 2009 followed by Tiger Woods, Lance Armstrong, Michael Phelps and Kobe Bryant. It seems we enjoy the discussion and debate of whom and what is "best." However, in the final tally among the greats, isn't it in the eye of the beholder as to who is the best athlete or, as in this discussion, the best white camellia?

Notable Quotes

Even if you're on the right track, you'll get run over if you just sit there.
—Will Rogers

In three words I can sum up everything I've learned about life: It goes on.
—Robert Frost

Return to TOC

EVER-BLOOMING CAMELLIAS— THE DREAM OF THE FUTURE

Bradford King

The dream of the future for camellia hobbyists is the development of camellias that will rebloom in the same season. Inspiration for this goal comes from the discovery in Asia of the three camellia species that have this capability. They are: *C. amplexicaulis*, *C. azalea* and *C. chuangtsoensis*. There are great opportunities when using these species in hybridizing. While there is much more to learn about them, this is what we know about them so far—

C. azalea

C. azalea is capable of flowering throughout the year and has been observed in China growing in the wild along the banks of a small stream. It has also been observed in the research greenhouse at Longwood Gardens in Pennsylvania. Longwood Gardens began their breeding with *C. azalea* in 2000 with the specific goal of producing repeat-blooming, cold hardy camellias. I began hybridizing with pollen of *C. azalea* from Longwood Gardens in 2006. I used 'Tama-No-Ura' as the initial seed parent which resulted in four seedlings of which only one has survived. The loss of seventy five percent of these seedlings is extremely high. Typically, seedling loss is less than 15 percent. This identifies a major problem with *C. azalea*. It is hard to grow on its own roots and, apparently, this is also true of its seedlings. The plant looks as if it has an iron or mineral deficiency but applications of iron or fertilizer with

trace mineral elements (Miracle Gro) doesn't alleviate the problem. This is an area for further study.

In addition I have observed, as has You Muxian from China, that *C. azalea* hybrid seedlings develop much slower than japonica seedlings. Why is this the case? This needs to be investigated more thoroughly.

Fortunately *C. azalea* grafts have not had the iron/mineral deficient problems, but Longwood Gardens reports leaf nacreous on some of their grafts. This has not been a problem here in California where we grow them outside in pots. Longwood Gardens has also reported that many of the seed pods open in 2 - 2 1/2 months which is not long enough for them to develop viable seeds. However, You Muxian from China completed control crosses with *C. azalea* which developed seed pods with viable seeds in 100 days which is half the amount of time a typical japonica takes to develop its fruit. This is also worth more careful study.

Longwood Gardens is the only place in the United States I am aware of using *C. azalea* as a seed parent. Professor Gao Jiying of China reports that *C. azalea* has been used as a seed parent with 21 different camellia species and 24 species with *C. azalea* as a pollen parent. In addition they have 500+ hybrid seedlings.

Interestingly, this specie thrives in hot temperatures of 90°-100°F. and can withstand cold to 23°F. This provides many opportunities to breed cultivars that can tolerate a wide range

of temperature or that can live in areas where camellias typically can't survive.

C. chuangtsoensis

This is the newest camellia repeat-blooming species to be discovered. It was collected in a deep mountainous area of China in 2008. The first report to the English speaking world is in the fall 2009 issue of the *American Camellia Journal*. It is described as having a deep yellow small single to semidouble flower with 12 to 15 non-waxy petals. The Chinese naturalists and scientists are collecting scions to propagate. Therefore, hybridizing has not yet begun. What will the future bring? Can you envision a golden yellow camellia blooming several times a year under a live oak in your garden? This could be the camellia your grandchildren grow and treasure.

C. amplexicaulis

A hundred trees of this species were discovered in the foothills of Mt. Tam Dao in Vietnam. It also grows in the Yunnan Province in China and has been propagated for years in Vietnam. It has small purple red flowers with thin white edges that are borne singularly or in clusters at the tips of shoot and leaf axils. It generally blooms in summer and autumn yet can be induced to bloom all year. In Southern California it blooms from January until April. There are two clones—a long leaf and a short leaf form. The blooms are very similar, but the short leaf clone has a brighter red bud and slightly redder flower. It will be interesting to see if seedlings from these clones show any significant differences.

C. amplexicaulis is both a sound seed parent and a pollen parent. According to reports from Japan it crosses with a number of *C. japonica* cultivars. The most compatible cultivar in my breeding program is 'Tama Peacock'. Dan Charvet is using *C. amplexicaulis* in his breeding program in Fort Bragg in Northern

California. It seems to cross with *C. reticulata*. *C. amplexicaulis* has some cold-hardy properties which add to its potential in a hybridizing program.

What's Next?

The key ingredient in fulfilling the promise of developing ever-blooming camellias is for more camellia growers to begin to do controlled crosses with these species. What is needed? The hybridizer personally will need patience, passion, and persistence, several plants of one or more of these species and several good seed-setting mother plants. I recommend the principles of hybridizing as follows:

1. Set an objective, e.g. repeat-blooming camellias
2. Use seed parents that can set seeds, e.g. singles, semidoubles, and loose peony forms but not full peony, rose form or formal double forms because they are female sterile.
3. Use a pollen parent that has one or more of the characteristics that match the objective, e.g. *C. azalea*, a repeat-blooming camellia.
4. Do only controlled crosses to increase probability of reaching the breeding goals.
5. In early summer place nylon bags on seedpods to insure all seeds are collected.
6. Germinate all resulting seeds by soaking them in warm water for 7 hours.
7. Place the seed in a germinating container such as a covered plastic container at least 7 inches in height filled to one-third with pre soaked peat moss.
8. When the seedling has two leaves move it to a pot with a camellia soil mix which is acidic, high in humus and loose with good drainage capabilities.
9. Create a "miniature green house" by placing a plastic bag supported by coat hangers or other wire over the pot to provide adequate protection and moisture
10. When the seedling has mature leaves and the weather is cool remove

the plastic cover and grow it like any other potted camellia.

11. Apply liquid fertilizer every two weeks, e.g. 4-12-4 works well for the first year or two.

Editor's note: Perhaps a lesson in patience will be at work here.



ANOTHER PERSPECTIVE OF YESTERDAY, TODAY AND TOMORROW

Bradford King
Arcadia, California

I believe the importance of Yesterday is our personal memories and history. Memories are stored treasures—marriage, the birth of a child, achievements large and small. What was healthy and satisfying yesterday helps in making choices today. On the other hand, we also can learn from yesterday's mistakes and less than satisfying experiences. When we repeat that which is unsatisfying, self-defeating or unhealthy we are in trouble. However, this is an article about camellias, so let's switch gears.

Some of yesterday's great camellias are still great today. For example, during the Orange County Society visit to Nuccio's in March a wonderful large rose red bloom with white blotches and wavy petals caught the group's attention. It was 'Cornelian' one of the original twenty *C. reticulata* cultivars from Yunnan China. This cultivar has been in the United States since 1948; it has been grown for its beauty in China for hundreds of years. We know it as 'Cornelian' but it was imported as 'Damanao' which means "Large Cornelian." It grows vigorously with large "reticulated" leaves. It has been widely propagated throughout the world because of its wonderfully variegated flowers and excellent growth habit. Stirling Macoby, the noted Australian garden author, wrote "It is a spectacular bloom . . . a jewel of a flower." See back cover.

A key question to a healthy life is to answer these kinds of questions—What do I want to do today? What do I need to do today? What can be done tomorrow? Your answers lead to a focused life and a sense of accomplishment and well being. Drifting through life has an appeal but it reminds me of those addicts who drift aimlessly in a pleasant unproductive haze. It may seem relaxing but most often, when one

looks deeply inside, it is an escape from pain and anxiety. One such person I treated "awoke" at age 50 and wondered where his life had gone and what tomorrow would bring. Finally off drugs but profoundly depressed, it was finally time for him to confront the question of what to do today? No more procrastination and no more self-medication because it is never too late to live.

What has this to do with camellias? Nothing and everything! Nothing because the answers may have nothing to do with camellias, but old and young will need to answer the "Questions" to have a meaningful productive life. I think gardening, especially the camellia hobby, is one of the best ways to answer these "Questions" because there are physical, intellectual, social, creative and spiritual opportunities at play. In addition, people need vitamin D for robust physical health; daily exposure to twenty minutes of natural sunlight is an excellent way to obtain this needed vitamin. However, this is enough musing about "Today." What about "Tomorrow?"

On the March visit to Nuccio's Nurseries the Orange County Camellia Society members saw several full-grown fifteen foot *C. japonica* in full bloom surrounded by hundreds of potted camellias and azaleas. They looked terrific! I remember seeing them many times previously but had never paid attention to them and asked, "What are they?" "Tomorrow," Jude Nuccio answered. The large to very large strawberry red semidouble and peony form flowers were spectacular. There were hundreds of flowers on the upright spreading trees that reached the very top of the lath structure. 'Tomorrow' was registered in 1953 by Tick Tock Nurseries in Georgia and has mutated seventeen times. This makes it one of the most

prolific sporting camellias. Mutations occur in some japonica cultivars, a few sasanqua but, as far as we know, no reticulata camellias. The reasons for sporting lie deeply buried in camellia genetics.

Most of the 'Tomorrow' mutations were caught by camellia growers in the South where it originated. However, three mutations are from California. The most well known is 'Tomorrow Park Hill', a sport of 'Tomorrow Variegated'. It was discovered on Ralph Peer's Hollywood estate, "Park Hill." It is a large to very large light soft pink with deeper pink petal edges and lovely white variegation. It is grown widely and often wins crystal at camellia shows in the treated and untreated categories! Ralph Peer was an avid camellia collector and the founder and first president of the Los Angeles Camellia Society in the 1950's. His greatest camellia achievement was the importation of reticulata camellias into the United States from China in 1948. He shares this honor with Descanso Gardens.

In 1984 John Movich of La Verne California caught a white sport of 'Tomorrow'. 'Tomorrow White' is a large to very large flower but has not been seen frequently in recent years at camellia shows. John and Sonia Movich were active in the Pomona Valley Camellia Society and raised their family in La Verne.

'Tomorrow's Tropic Dawn' is a second generation sport. It mutated from 'Tomorrow's Dawn', a sport of 'Tomorrow'. In 1967 R. N. Merino of

Fresno introduced this large to very large white flower with its occasional red lines and dashes. An interesting characteristic is that as the bloom ages the white fades to blush. It is available at Nuccio's Nurseries. (See back cover)

What will tomorrow bring us from Nuccio's? 'Princess Masako' is expected to be available in the fall of 2010. It is a lovely large white with a red border with both small and large red stripes. This japonica is a semidouble (lotus-form) to loose peony flower with tubular split stamens. It is a mid to late season bloomer. The leaves are medium sized and narrowly elliptic. The plant grows upright and spreading. It was named and released by Soshin Hirai in 1989 from Saitama Prefecture, Japan and is a mutation of 'Ikari-Shibori'. Named for the Crown Princess Masako of Japan, wife of Crown Prince Naruhito, the first son of Emperor Akihito and Empress Michiko who is a member of the Japanese Imperial Family. (See back cover)

Yesterday teaches us what to do today. Today is the immediate reflection of ones current life. In Shakespeare's play, Macbeth reflects on his wife's death and his indifference to this loss in his famous "tomorrow" soliloquy in Macbeth—his was a tragic and depressing view of life.

One wonders, if Macbeth had paid more attention to his day-to-day choices, would he have been more fulfilled. If so, symbolically then, his garden would have thrived and his camellias bloomed beautifully!



In the spring, at the end of the day, you should smell like dirt.

—Margaret Atwood

June is bustin' out all over.

—Oscar Hammerstein II, 1945

Coffee. Garden. Coffee. Does a good morning need anything else?

Betsy Cañas Garmon

www.wildthymecreative.com

THE WONDERFUL WORLD OF SPORTS

Bradford King
Arcadia, California

In the United States, especially Los Angeles, we have many enjoyable athletic sports. In the fall there is football; spring and summer it is baseball and in winter there is skiing, hockey, and basketball. However we should never overlook the interesting and diverse camellia sports.

Sports are genetic mutations in plant characteristics. These can be changes in flower form and color as well as leaves, branches and growth habit. Mutations are a valuable source of new plants. In camellias there are many japonica sports but only a few sasanqua and no known reticulata mutations. The reasons for sporting are part of the plants genetic inheritance and evolutionary history.

HOW SPORTS DEVELOP

The growth of a plant involves continual cell reproduction. When a cell divides two chromosomes with similar genes are produced. When a gene copy varies from the original gene this is a mutation. Most mutations occur in the body cells (somatic tissues). When this is located at the growing point the entire twig or branch may be affected. When a mutation occurs at the growing point of a camellia we say it has "sported." The sudden appearance of a change in a plant's flowers, leaves or branches is the first sign that a mutation may be taking place.

When a mutation occurs in a seed it can be passed on to subsequent generations through the reproductive cells. The resulting individuals will have the mutant condition in both the body cells and germ cell. This means that when the mutant plant sets seed they will also inherit the new characteristics. However, we are most interested in "bud sports" or mutations in the body cells.

FLOWER COLOR SPORTS

Sporting is most frequently observed in *C. japonica* flowers. Typically a small branch on a solid colored cultivar suddenly produces a flower different in color than is customary. If you come across one in your garden, it should be labeled. Tie a piece of colored yarn or a plant label on the twig or branch that produced the new flower in order to identify it the next blooming season. If it continues to produce the new color, you have been lucky enough to have captured your own sport. This mutation will need to be vegetatively propagated by grafting or cuttings in order to yield plants carrying the genetic mutation. Flower color changes are most often found in white flowered cultivars with some color. Generally a pink bloom occurs first followed by deeper pink or red. The deepest color sport is usually the most stable with lighter colors more frequently reverting to the original color.

A good example of color sporting is 'Betty Sheffield'. This *C. japonica* has over 20 color variations. Many are unstable with a tendency to return to solid pink or red flowers. 'Betty Sheffield' is a loose peony white flower striped and blotched pink. While an attractive bloom in its own right, it has been surpassed by many of her descendents. The most desired are 'Betty Sheffield Supreme', 'Betty Sheffield Coral', 'Elaine's Betty', 'Funny Face Betty' and 'Betty's Beauty'.

'Betty Sheffield Supreme' is one of the loveliest sports of 'Betty Sheffield'. It was discovered in 1957 by Mrs. Green of Alday Georgia. The flower has a loose peony white flower with various amounts of deep pink on the petal edges. 'Betty Sheffield Coral' is a medium to large semi double to loose peony flower with a nice coral pink flower. It readily sets seeds and

grows upright making it a good potted plant or landscape camellia.

'Elaine's Betty' is a sport of 'Betty Sheffield Coral' which is a light coral with occasional deeper coral pink stripes. 'Funny Faced Betty' (aka 'Charming Betty') has a medium to large pale pink with occasional deeper pink stripes. I think the most beautiful sport is 'Betty's Beauty'. It was discovered in 1976 by Mr. F. Moore at the Huntington Gardens in San Marino, California. It is a lovely white flower edged with a fine rose border.

FOLLIAGE SPORTS

There are a number of foliage sports that are interesting and attractive. These genetic leaf mutations come in various forms. The term "Benten" has been used in Japan to indicate a cultivar on which the leaf is darker in the center bordered by a lighter margin.

A good illustration is 'Benten-Kagura' a foliage sport of 'Daikagura' which has irregular green leaves with clear, defined yellow gold variegation and a rose red medium to large peony formed flower. A second example is 'Hana-daijin-benten' which has a green irregular shaped leaf bordered with a light yellow margin. This sport of 'Hana-daijin' has a deep rose pink single bloom. Shirley Real discovered a beautiful sport of 'Debutante' in her garden. It has leaves with a light yellow green margin, deeper green center and an irregular shaped leaf.

FLOWER FORM, PETAL AND GROWTH HABIT SPORTS

While much less frequent, mutations also occur in flower forms, petals and growth habit.

A good illustration is 'Egao Corkscrew' which is a sport of 'Egao'. It has mutated its growth habit, flower form and petals. It has a distinctive zigzag growth habit which gives its name. In addition its flower has morphed into a loose peony form with ruffled petals. However it carries the same pink as 'Egao' with approximately half the blooms remaining semidouble like 'Egao'. It is a very distinctive plant that makes an excellent bonsai or potted specimen. It can thrive in sun or partial shade like 'Egao'.

CONCLUSION

It is very easy for me to tell you my favorite athletic sport. It is football. I prefer college to the pros and my team is USC. However when it comes to camellia sports I find it much more difficult to answer this question. When pressed I would pick the flower of 'Betty's Beauty', and the zig-zag growth of 'Egao Corkscrew' but I am much more impressed with the variegated bloom of 'Shibori Egao Corkscrew'. But what is your favorite sport?



Sports in the Non-Camellia World

1. Name the only sport in which the ball is always in possession of the team on defense and the offensive team can score without touching the ball.
2. Where are the lakes that are referred to in the "Los Angeles Lakers?"
3. There are seven ways a baseball player can legally reach first base without getting a hit. Taking a base on balls (a walk) is one way. What are the other six? (Answers on page 13.)

NUCCIO'S NURSERIES CELEBRATES THEIR DIAMOND JUBILEE

Bradford King
Arcadia, California

This is the seventy-fifth year for the Nuccio's Nurseries begun in 1935. Brothers Joe and Julius Nuccio launched this successful venture from their backyard in Alhambra. We are very fortunate that this family business of growing rare and beautiful camellias and azaleas has continued in the capable hands of the "Nuccio boys"—Julius, Tom and Jim. They are very well-informed about camellia and azalea culture, willing to share their expertise and always warmly greet and courteously help their customers.

While I have lost count of the number of times I have been to Nuccio's, I will always remember my first visit. I had just moved from the historic but cold climate of New England where camellias are only grown in greenhouse. I was familiar with azaleas but was struck by the beautiful flowers blooming in January and February on the landscape camellias around Arcadia. I read the Sunset book on growing camellias and could identify 'Herme' and 'Debutante' but several others stumped me. A number of friends informed me that the absolutely best place to get information and to purchase new camellias was at Nuccio's in Altadena. I took flowers and leaves for identification. Jude quickly identified 'Kramer's Supreme', 'Pope Pious IX', 'Magnoliaeflora' and 'Mathotiana' but was stumped by a medium semidouble white flower. He consulted with his cousins with no luck and then asked his Uncle Julius if he knew its name. Julius answered promptly and definitely that it was 'Alba Supera'. Later I found a specimen in the Huntington Gardens near the entrance to the Japanese garden which confirmed his identification. I learned that it is an antique cultivar from Europe that came to Magnolia Gardens in

Charleston South Carolina in 1840. It has also been known as 'Nevius', 'Northern' and 'Tonnie Leche'.

We are indeed fortunate in having Nuccio's Nurseries still in business because dozens of other nurseries have not been able to survive. When you look at copies of *The Camellia Review* from the 1950's you will see ads and announcements of new camellia introductions that we still grow and appreciate, but the originating nurseries are no longer with us. For example, Tuttle Brothers Nursery in Pasadena introduced the lovely salmon pink formal double 'Mrs. Tingley'. Kramer Brothers Nursery in Upland introduced 'Kramer's Supreme' described as "a large scarlet red double peony form of lasting quality." It won the 1957-1958 Margarete Hertich Award. McCaskill Gardens of Pasadena introduced 'Star Above Star' a lovely lavender white flower with pink petal tips arranged as one star superimposed on another.

The Nuccio Family has introduced at least 130 camellias and 103 azaleas. This is an outstanding achievement which continues year after year. This year the Nuccios are introducing five new cultivars for their Diamond Jubilee. A brief description of each is provided below. Which ones appeal to you?

Don and Mary Bergamini, who specialize in miniature and small camellias, developed a miniature to small white anemone form flower striped with shades of pink and red named 'Chris Bergamini'. Chris is their first grandchild (grandson) and is now a senior at Alhambra High School where he plays center on the football team. He is a great kid and so is the flower named after him. Congratulations to the Bergamini family and thanks to the Nuccios for propagating this lovely bloom.

Two new *C. sasanqua* are offered

that are great additions for landscaping in a sunny location. 'Old Glory' is a single to semidouble medium white flower bordered with a lovely deep rose pink with wavy petals that do look like a flag waving in the breeze. I'm enjoying its blooms this fall in my southwest landscape garden. 'Sunbeam' has very interesting leaves with a fine golden yellow edges when grown in strong sunlight. The flower is a large semidouble rose pink toned lighter on the petals. It is a low growing spreading plant.

A new nonreticulata hybrid called 'Tiny Gem' is a very compact dwarf camellia with small dark leaves. It has a tiny white single flower. This cultivar is great for a patio container or small space in the garden. It is an attractive rounded plant that blooms in mid season. The final introduction is a beautiful camellia specie—*C. Grandiflora*. It produces a large single light orchid pink flower on an upright strong plant. It makes a great specimen landscape plant with its japonica-like foliage and beautiful large blooms.

Finally there are three cultivars available for purchases that are not listed in the new catalog. 'Sekiyō' is a wonderful sasanqua with a medium 3 1/2 inch rose red raspberry toned bloom with a cluster of yellow stamens. It is upright and spreading in growth habit. Nuccio's got it from Tom Perkins a number of years ago. I planted one five gallon plant last fall

which is in full bloom in November.

'Red Devil' is a small red semidouble flower with pointed somewhat "V" shaped petals. It is similar to 'Red Hots' but smaller, one tone darker red and blooms later. A very striking variegated 'Red Devil' was shown in the Modesto camellia show which inspired me to variegated one. 'Red Devil' has been entered for several years in shows and now it is also possible to see its variegated form.

Speaking of variegation leads me to report that Nuccio's is now selling 'Royal Velvet Variegated' even though it is not listed in the catalog. It is wonderful with white blotches but outstanding when the white forms a moiré pattern on the dark red flower. In addition there is 'Phyllis Hunt' which has not been previously listed in the catalog. It is a very large *C. reticulata* with a rose form double flower with shades of light pink to white with deep pink petal edges. It was introduced in 1988 by John Hunt from Australia. It can produce show winning flowers when gibbed as well as natural blooms.

In conclusion we heartily congratulate the Nuccio's for their current introductions and their many years of service to camellia growers over the last seventy five years. We love our camellias and the Nuccio family!



It takes a while to grasp that not all failures are self-imposed, the result of ignorance, carelessness or inexperience. It takes a while to grasp that a garden isn't a testing ground for character and to stop asking,
what did I do wrong? Maybe nothing.
Eleanor Perényi, *Green Thoughts*, 1981

When weeding, the best way to make sure you are removing a weed and not a valuable plant is to pull on it. If it comes out of the ground easily, it is a valuable plant. Author Unknown

I appreciate the misunderstanding I have had with Nature over my perennial border. I think it is a flower garden; she thinks it is a meadow lacking grass, and tries to correct the error. ~Sara Stein, *My Weeds*, 1988?

AMERICA'S ONLY TEA PLANTATION

Bradford King
Arcadia, California

The Charleston Tea Plantation, located in the heart of South Carolina's low country, is the only commercial tea farm in the United States. The giant tea company Lipton imported all its tea leaves from a number of other countries because it was believed that tea plants *C. sinensis* wouldn't grow in the United States. On a recent visit to Charleston we observed hundreds of thousands of *C. sinensis* growing in full sun in loose, sandy soil. There are large amounts of natural moisture augmented by irrigation for an average of 52 inches of water a year.

Only new leaves are used to make tea and are harvested every 20 days from May to October. During those 20 days a mature tea plant grows from six to eight inches. In the other sixteen countries where tea is grown it is usually hand-picked. A worker on an Asian tea farm would be paid the equivalent of several dollars a week. It is impossible for an American company to be profitable and pay minimal wages to have leaves hand-picked. The Charleston Tea Plantation is profitable because they built a unique tea-picking machine nicknamed the "Green Giant." It is able to clip new leaves from the top of the plants. One man operating the "Green Giant" can do a block of plants in a day. The farm has 20 blocks of mature plants and is thus able to harvest all the blocks every 20 days. This is an economical and profitable business plan. The tea also tastes good, too.

Green tea is produced from freshly harvested leaves that are steamed briefly to make them wilt. The green tea has a light color and has a mild grassy or earth flavor. Oolong tea is partially oxidized by steaming the leaves and then gently rolling them which bruises the leaves. The leaves are then dried for 15 to 18 minutes in a special drying machine

which releases a floral or fruity flavor to the tea. Oolong tea is traditionally paired with Chinese food. To produce black tea the leaves are steamed, firmly rolled to bruise them and dried for 50 minutes in the drying machine producing a tea that is completely brown. This is the rich dark tea that is enjoyed by the majority of tea drinkers through out the world. Commercial decaffeination is done chemically but, if you prefer less caffeine, you can discard the first infusion after steeping the tea for a minute in hot water and drink the second infusion. The hot water releases the caffeine without added chemicals.

How did ice tea make its way into the American food scene? It is believed that the first ice tea was served at the 1904 Saint Louis World Fair. Vendors in the Indian exhibit were trying to sell hot tea to visitors during the summer heat and no sales were being rung up until ice was added. Ice tea was born and continues to be a very popular way Americans drink tea.

Within a mile of the Charleston Tea plantation is a majestic treasure. The Angel Oak is a massive Live Oak (*Quercus Virginian*) draped with Spanish Moss on drooping limbs and a wide-spreading canopy presenting an aura of an enormous angel. The Angel Oak is believed to be 400 years old and has a circumference of 25.5 feet and limbs that reach 89 feet. It casts a huge shadow of 17,000 square feet. While Live Oaks are not noted for their height this one is 65 feet tall. Live Oaks are wonderful specimen trees and clusters of them resemble free form works of art whose canopies frequently shade camellias. The Angel Oak is the most impressive Live Oak I have seen on either the Pacific or Atlantic Coast.

LANDSCAPING WITH SUN CAMELLIAS

Bradford King
Arcadia, California

Jim Nuccio recently led an informative and fun-filled behind the scene visit to Nuccio's Nurseries for the Orange County Camellia Society. A good time was had by all with everyone taking home a new camellia. Tom was his usual gregarious and helpful self. Jude and my wife conspired behind my back to keep me in line. I left inspired with ideas about using sun camellias in the landscape.

LANDSCAPE DESIGN

My goal was to revitalize the southwest front of out yard. We wanted an attractive area that would also reclaim a lovely brick walkway that had become overgrown.

We wanted flowering evergreen shrubs. The choice of sun camellias fit the bill. While some will choose a landscape architect, I prefer to create my own garden design. The planning and creating is too much fun to pass on to someone else. Some of you may hire a gardener to plant and groom the landscape. I like the digging and getting my hands in the earth. I also like the exercise and satisfaction of accomplishment as a counterpoint to uncontrollable life issues like the financial crisis. Regardless, the key is to do what you can that gives you pleasure.

The first step is to get agreement from your partner that the project is desirable and my wife Lynn was enthusiastic. The second step is to study the site for the make over. I measured it and did a rough sketch. I looked at it critically, sought input from my wife and we agreed on the camellias we wanted for our new garden to commemorate our anniversary.

SUN CAMELLIAS

There are many camellias that will thrive in direct sunlight.

Generally they are *C. sasanqua* which is recognized as a true camellia species. Some taxonomists give *C. hiemalis* the status of also being a species. Most agree that *C. vernalis* is not a separate species but is a non-reticulata hybrid that arose naturally between wild *C. japonica* and wild *C. sasanqua* many years ago. In scientific circles the debate continues. However camellia growers call all of them sun camellias.

C. SASANQUA

The first *C. sasanqua* came to the USA from Japan to California in the 1930's and were imported by Japanese nurserymen and American nurserymen. When the Japanese nurserymen, J.W. Uyematsu, owner of Star Nurseries, and F. W. Yoshimura, owner of Mission Nurseries were interned during World War II, their stock was picked up by sympathetic nurseries including Manchester Boddy, owner of Rancho del Descanso now known as Descanso Gardens. In this process some of the original Japanese names were lost. Subsequently some of these plants have been renamed and introduced into the market place. In addition many new cultivars have been introduced by hybridizers.

The *C. sasanqua* are the first camellias to bloom. Some will begin as early as August but they generally peak in November through January. The flowers are single and small to medium with six to eight petals. The profuse flowers are usually white, pink or white with pink or red edges. The petals fall after a few days and new flowers open in succession for four to six weeks. The petals on the ground form a lovely carpet and can be left as an attractive freeform artistic display. There is little concern that this will cause petal blight. An additional attraction is that many of

these flowers are fragrant. A few people complain that they are too pungent. The foliage is dense with small leaves which lend themselves to topiary, espalier and bonsai. *C. sasanqua* are excellent for hedges and foundation plants. Their beauty is in the lovely profusion of their masses of flowers and evergreen foliage.

Three good pink *C. sasanqua* are: 'Hugh Evans', a profusely blooming single, 'Jean May', a loose peony to formal double soft pink flower and 'Bert Jones', a large single fragrant silver pink flower. If you prefer white with a pink or red border you might consider 'Navajo', 'Rainbow', 'Double Rainbow' and 'Yae-arare'. 'Navajo', a semidouble rose red flower with a white center, does best in full sun. It was imported from Japan and propagated by Nuccio's Nurseries. The name tag was lost in

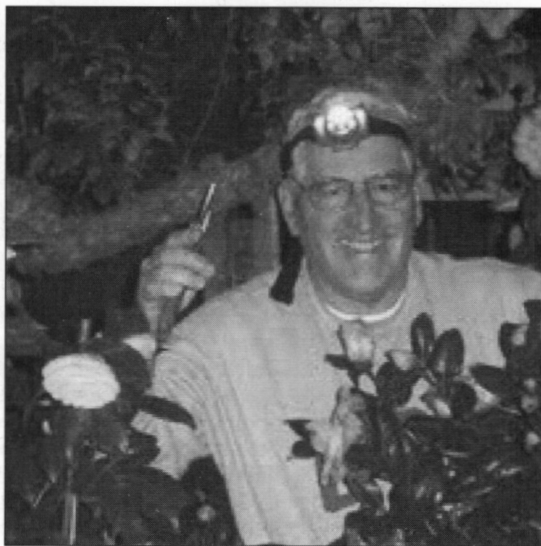
shipping. The Nuccio's renamed it 'Navajo'. 'Rainbow' is a large white single with a red border. Personally I consider 'Double Rainbow' with its semidouble white flower and rose colored edge the best of this style *C. sasanqua* and selected it for our new camellia sun garden. However 'Yae-arare' is very popular due to its large size white flower with pink on the tips of the petals. Two excellent white *C. sasanqua* are 'Setsugekka' and 'Mine-No-Yuki' which is sold as 'White Doves'. However, my favorite

white is a new introduction by Nuccio's called 'French Vanilla'. It is a large creamy white single that is a fast upright open grower. This was added to our list for the sun camellia garden. If you want an anemone form *C. sasanqua*, the lovely miniature light pink with deeper pink tones on the edge of 'Choji Guruma' would make a good choice.

CAMELLIA HEIMALIS

This specie has only 41 cultivars listed in the 2009 Camellia Nomenclature, yet several have gained a well-deserved popularity for

their beautiful flowers, attractive foliage and usefulness as landscape camellias. The best red-toned sun camellias are found here. For example, 'Dazzler' has a medium rose red semidouble flower that grows vigorously into an open spreading bush. It was introduced by



Sometimes we pick blooms late at night!

Nuccio's Nurseries in 1960. Tom Dodd Jr. from Alabama introduced 'Bonanza', an excellent large deep red semi-peony bloom with wavy fluted petals. It often blooms early and keeps producing flowers through the fall.

The profuse small red semidouble to rose form double flowers on 'Shishi-Gashira' bloom on a low compact shrub with small serrated dark green leaves. It is originally from Japan where it was available in 1894. It is a mainstay in my garden where it

has bloomed for thirty years. It is five feet by five feet and 3 feet wide. It rarely needs to be pruned. I basically cut out the dead wood and any encroachment on the garden path. If you are looking for a small compact camellia for a ground cover or small space, 'Dwarf Shishi' and 'White Shishi' are good choices. 'Dwarf Shishi' is a seedling of 'Shishi-Gashira' introduced by Toichi Domoto in 1988. It has the bright red flower of its parent. 'White Shishi' can be found at Nuccio's Nurseries. Another presumed seedling of 'Shish-Gashira' is 'Showa-no-Sakae'. It is semidouble to peony in form and bears a soft clear pink flower which blooms early. It is a low grower that makes a waist-high hedge or groundcover. 'Showa Supreme', a chance seedling of 'Showa-no-Sakae', was propagated and introduced by Nuccio's Nurseries. It is a larger pink peony form pink and many hobbyists concede that it is an improvement over its parent. Finally, no one should overlook the very popular 'Kanjiro' with its rose pink shading to rose red. It is a medium semidouble flower and grows on an upright bushy plant that can reach 20 feet in height. It makes a great show as a specimen plant, hedge or foundation plant. It sets seed readily and is one of the best camellias to use as understock for grafting. We selected 'Kanjiro' for our new garden.

CAMELLIA VERNALIS

The beautiful 'Egao' with its deep pink shading to darker pink in the center is one of the loveliest heralds of the camellia season. 'Egao' looks more like a *C. japonica* than a *C. sasanqua* with its medium pink bloom of 16 to 20 petals and clear yellow anthers. Its Chinese name is 'Xiaoyan' or in English "Smiling Face". It was brought from Japan to the USA in 1972 by Nuccio's Nurseries. The medium leaves and vigorous upright spreading growth habit make this camellia a good

specimen plant as well as a camellia show winner. It blooms in Southern California from November until February depending on local conditions.

When 'Egao' is infused with virus variegation it is called 'Shibori-Egao'. I am told that "Shibori" is the Japanese word for variegation. This exquisite pink bloom with white blotches is very often a show winner. It was originated at Kurume, Japan and imported to by Nuccio's Nurseries in 1974. The leaves are oval and green with yellow splotches due to the virus. It is less vigorous than 'Egao', but is a very showy camellia plant and flower.

Grady Perigan of San Marino California discovered a sport of 'Egao' with smaller blooms than 'Egao'. It is a lighter pink veined with a fine white edge. The plant is also more compact in growth habit with smaller foliage and sets buds at an early age. It was named 'Grady's Egao' and is propagated at Nuccio's Nurseries.

The Nuccio's caught a very interesting flower and growth habit sport from 'Egao'. It has ruffled pink petals in a semidouble to loose peony form and distinctive zigzag branches which look like a corkscrew. Thus, the name 'Egao Corkscrew'. A variegated form is also available called 'Shibori Egao Corkscrew'. They both make wonderful camellia bonsai that can be grown in the sun. 'Egao Corkscrew' is listed in the *Camellia Nomenclature 2009* as a non-reticulata hybrid.

'December Rose' is a seedling of Egao that the Nuccio's introduced and has a larger rosier pink flower than its parent. We choose this semidouble bloomer for our new "Anniversary Garden". It is vigorous and blooms late.

In 1964 McCaskell Gardens of Pasadena, California introduced their *C. vernalis* seedling 'Star Above Star'. The semidouble flower of one star superimposed on another star received the Ralph Peer Sasanqua

Seedling award for 1969. The petals are white shading to lavender pink at the edges. It is a vigorous, bushy and upright shrub that looks good as a specimen or as part of a landscape planting of mixed sun camellias.

Nuccio's extremely popular 'Yuletide' blooms during the holiday season. We loved 'Yuletide' with its single bright red petals and golden stamens and added it to our garden. It provide a transition from a daylily collection that I call the "Maroon and Gold Garden" which is populated with 'California Sunshine' and 'Texas Redstar' daylilies and an 'Orange County Ash' which I grafted from a scion won in the Southern California Camellia Society raffle when Tim Thibault was the program speaker.

I grow all of the above *C. vernalis* because of their early blooms, beautiful colors and their versatility. I have 'Egao Corkscrew' as a bonsai. 'Shibori Egao Corkscrew' is a potted specimen that is moved to the patio when in bloom. 'Egao', 'Grady's Egao' and 'Shibori Egao' are used as sunny landscape camellias that also are good show winners in the species class. 'Star Above Star', also a show winner, is a front yard foundation plant. Originally we used 'Yuletide' as a small hedge around a perennial garden. Its compact upright growth habit with small dark foliage makes it

a very versatile landscape plant. The University of Southern California Alumni House has a double row of over a hundred 'Yuletide' camellias as a combination hedge and foundation planting which is striking in bloom and neat and attractive all year with its dark green foliage.

OUR CAMELLIA PROJECT

The design for the new sun camellia garden was sketched. The camellias ordered included 'French Vanilla', 'Double Rainbow', 'Kanjiro', 'December Rose' and 'Yuletide'. Earlier *C. sasanqua* 'Old Glory' caught our eyes with its lovely medium white blooms, bright rose red edges and crinkled petals. Nuccio's have built up their stock so it is now readily available. Tom recommended a rose red *C. sasanqua* called 'Sekijo' which complimented the colors already chosen so we added it to the new garden.

The next step was to dig out a tired group of basic yellow daylilies and the sun-loving but invasive African Iris (*Dietes*) that Tom aptly calls "gas station flowers." The soil was amended with coarse peat moss. Mondo grass was used to edge both sides of the new garden. This ties the new garden to the rest of the landscape where the mondo grass is well established. (Continued on page 19)

•••••

Which award-winning camellias are suggested by these descriptions?

1. Polynesian ritual
2. Lass from South Carolina
3. Fireman's Terror
4. Her Majesty's Cape
5. Perfume on the top shelf
6. Santa's Helper
7. A joy to behold
8. Philadelphia Gong
9. Flaming Dessert
10. Celebrating sweethearts
11. Rose Parade official
12. A jewel from the nursery
13. A women's adornments
14. Hail Mary
15. Hey! Frosty
16. #1 Toe Dancer
17. Orderly heavenly bodies
18. Sarah Pallin
19. Night Rider
20. 3/4 movement
21. Need a potholder for these
22. Italian merry-go-round
23. A Southern California city
24. Breakfast anyone?
25. A motor race in France
26. An ancient Egyptian
27. "Go Trojans!"

How did you do? See page 19.

Return to TOC

A HIDDEN GEM

Bradford King
Arcadia, California

The Southern California Camellia Society's Camellia Show at Descanso Gardens was very successful. Nuccio's Nurseries table drew a large audience. People loved the sixty beautiful blooms and the cluster of small fragrant flowers in their signature green bottles. They appreciated the lovely well-known *C. japonica* 'Nuccio's Pearl' and 'Nuccio's Gem'. However, the biggest attraction was 'Scented Gem'. It was the "hidden gem" of the show. Most of us had never seen it before. Where has it been?

It was introduced by Nuccio's in 1983. It was a seedling given to them by Toichi Domoto, one of the pioneer California camellia breeders. 'Scented Gem' is a miniature rose pink bloom with central white petaloids. It has the sweet fragrance of its seed parent *C. lutchuensis* and the

anemone form from its pollen parent *C. japonica* 'Tinsie'. It has neat small leaves on a strong upright plant. The young foliage is crimson which gives a second season of spring beauty. . We saw the plant in bloom with a dozen well-formed tiny flowers and enjoyed the sweet fragrance. This little cutie with its lovely scent deserves more attention. Several of us have now added it to our collections. Mine is comfortably displayed on a shaded patio where it can be easily seen from the living room. This is an excellent camellia for pot culture and can be maintained in a small space.

Gems often come in a small package! (See Brad's picture on the inside cover of this issue.)



Failure is the path of
least persistence.

—Anonymous

THE SEARCH FOR NEW CAMELLIA HYBRIDS

Bradford King
Arcadia, California

The search for new hybrid camellias has begun in China, Japan and America. The rediscovery of *C. azalea* in China by Gao and the finding of *C. amplexicaulis* and *C. flava* in Vietnam in 1994 offer exciting opportunities for new camellia hybrids. *C. amplexicaulis* has two important characteristics sought by hybridizer—the potential to re-bloom and its cold hardiness. *C. azalea* is also sought for hybridizing for its ability to re-bloom and to thrive in hot weather. *C. flava* is important because it is a yellow camellia that crosses with *C. japonica*.

In Japan hybridizing *C. japonica* with *C. amplexicaulis* and *C. flava* has resulted in numerous crosses some which have successfully bloomed. Shuko Kirno has published a paper which reported that hybrids with *C. amplexicaulis* have flowers similar in size and shape to *C. amplexicaulis*. In addition they tend to be resistant to cold. Hybrids with *C. flava* have not had time to bloom. However one that bloomed in 2002 was a double light yellow measuring 3 1/4 inches. Mr. Kirno recommends using *C. japonica* as the seed parents because they set seed. The species *C. flava* and *C. amplexicaulis* are used as pollen parents.

In China Professor Gao reported a small population of 1118 *C. azalea* plants in Southern China near the Honghuatan river. This is the only known "wild" population of this species in existence. They flower nine to ten months of the year in this location. Chinese hybridizers have made a number of *C. japonica* and *C. azalea* crosses. However, no one has reported if these hybrids are able to re-bloom.

In the USA a number of growers have grafts of *C. amplexicaulis*, *C. azalea* and *C. flava*. Nuccio's Nurseries have a number of *C. amplexicaulis* that are setting seeds.

They have two types—short and long leaves. Dan Charvet in Northern California has begun to use *C. amplexicaulis* in his hybridizing program. I have been able to cross *C. amplexicaulis* successfully with *C. japonica* 'Tama-no-Ura', 'Tama Peacock', 'Magnoliaeflora' and 'Betty Foy Sanders'. My most successful crosses are from 'Tama Peacock' as the seed parent. They show a leaf that is midway between the parent's leaves. My seedlings have not yet bloomed, thus it unknown what flower characteristics will be inherited or if the plant is capable of re-blooming. I like the notion of increasing the white line on *C. amplexicaulis* with the genetic white border on 'Tama-No-Ura', 'Tama Peacock' and 'Tama Americana' with a flower that opens up more than *C. amplexicaulis*.

A number of people in the United States have grafts of *C. azalea* and a few have reported successful flowering from June until October. Longwood Gardens grows *C. azalea* in a green house and has had blooms at different times of the year. They have a different clone from the more widespread *C. azalea* sometimes called the "ACS clone." Professor Gao from China provided cuttings to the American Camellia Society Research Committee chaired by Hulyn Smith. Gene Phillips has been successful in grafting *C. azalea* and has had flowers for several years. Mark Crawford, a Valdosta nursery owner, has a flowering hybrid called 'Windy' as a result of his successful crosses. He informed me that his flowering *C. azalea* died this year for no reason that he could determine. *C. azalea* is not easy to maintain. In addition this variety is very difficult to grow from cuttings, but *C. azalea* grafts are more successful. I have one doing well that was grafted in March 2007, but it has not bloomed. I made two successful grafts with a total of five scions in the

middle of April 2008. One had four scions placed on a large 'Narumigata'. Three scions survived and each has one bud. I believe this is a result of having large understock and being placed in a warm spot in the garden. The two other grafts are in a cooler area on the north side under shade cloth. The large graft first flowered in late September 2008 and the second and third in October. The new plant had a good callus but only minor new growth until significant new growth of 4 to 6 inches on each scion occurred when we were having fall heat. *C. azalea* is capable of new growth under the right conditions any time of the year. It is clear from other reports as well as my experience that *C. azalea* likes hot weather of 90° degrees, but it still needs shade and adequate moisture. I mist the new plants and seedlings most days mornings and afternoons especially when the day is hot and dry.

The past three years I have used pollen sent from Longwood gardens, but very few seed pods developed. The use of pollen from one fresh flower of *C. azalea* crossed with 'Tama-No-Ura' resulted in several seed pods and four seedlings. One seedling died; the remaining three are alive but show only minimal new growth. All are several years away from flowering. They do show leaf characteristics of *C. azalea*. The significance of this is the strong indicator that the cross was successful because of leaf form. The opportunity to make further progress is in having a flowering plant, but there are additional challenges. *C. azalea* blooms in summer and early fall when *C. japonica* buds are not ready to be used in hybridizing. Therefore, the pollen needs to be harvested and stored in the refrigerator or freezer until buds are mature. I expect to continue to use 'Tama-No-Ura' because it blooms early and is a strong seed setter. Gibbing for earlier blooms is a good strategy. Dr. Ackerman reported that pollen is viable up to three months in the

refrigerator and several years if frozen. The key is in harvesting and keeping the pollen dry. Anthers are placed on a paper towel and then dried and stored in a zip lock bag. I collect the moisture cotton "cubes" from pill bottles and put one in the bag to prevent moisture build-up which leads to fungus and nonviable pollen.

I am a proponent of hybridizing with *C. flava* to get yellow camellias because it crosses successfully with *C. japonica*. The more well-known yellow *C. nitidissima* crosses with *C. reticulata* but doesn't produce a yellow flower and, when crossed with *C. japonica*, rarely takes. When it does, most of the F1 hybrids are sterile. I have had seed pods but the seeds are hollow. I have not hybridized with *C. flava* as my two grafts are very small and have not bloomed. However, more experienced hybridizers are reporting success. In the 2007 American Camellia Yearbook, page 16, Dr. Clifford Parks writes "They are the most important species yet discovered in the effort to breed yellow hybrids. *C. flava* hybridizes readily with *C. japonica* to produce vigorous well-shaped hybrids. Flower color ranges from cream to pale yellow."

In conclusion, hybridizing is well underway in Japan and China with *C. azalea*, *C. amplexicaulis* and *C. flava*. It has just begun in the United States as growers receive scions from China and Vietnam. There are great opportunities in breeding new camellia hybrids from these three species. The goal of producing a re-blooming camellia for the landscape is of particular interest. The use of *C. amplexicaulis* to get a cold hardy re-blooming camellia would be a significant achievement. *C. azalea* offers the most promise for a re-blooming camellia and may also extend the range of camellias to climates that are hot and unfriendly to most camellias. The search for a large yellow camellia has been the hybridizers' vision since *C.*

nitidissima was introduced in the 1980's. The discovery of *C. flava* is the most exciting development in the last few years for furthering the camellia world's desire for a beautiful yellow varietal that will bloom in the landscape and win at shows. There

are too few of us persistent, patient dreamers seeking to make a breakthrough in hybridizing. We are looking for others to join the quest.



SMILING FACES

Bradford King
Arcadia, California

The beautiful deep pink shading to darker pink in the center of the flower 'Egao' is one of the loveliest heralds of the camellia season. 'Egao' is classified as *C. vernalis*. However, evidence suggests it is not a separate specie but a non-reticulata hybrid with *C. sasanqua* and *C. japonica* lineage. Regardless of its parentage, 'Egao' looks more japonica than sasanqua with its medium pink bloom of 16 to 20 petals and clear yellow anthers. Its Chinese name 'Xiaoyan' translates to "smiling face." It was brought from Japan to the USA in 1972 by Nuccio's Nurseries. Its medium leaves and vigorous upright spreading growth habit make this camellia a good specimen plant as well as a camellia show winner. Depending on local conditions, it blooms in Southern California from November until February which makes it a great bloom for the early camellia shows.

When 'Egao' is infused with virus variegation it is called 'Shibori-Egao' or, in other words, "Variegated Smiling Face." This exquisite pink bloom with white blotches is a show winner. It was originated at Kurume in Japan and imported to the USA by Nuccio's Nurseries in 1974. The leaves are oval and green with yellow splotches due to the virus. It is less

vigorous than 'Egao'. It prefers less sun and is more spreading in growth habit. Overall, it is a very showy camellia plant and flower.

Grady Perigan of San Marino discovered a sport of 'Egao'. Smaller than 'Egao', it is lighter pink and veined with a fine white edge. The plant has a more compact growth habit, smaller foliage and sets buds at an early age. Its name 'Grady's Egao' means "Grady's Smiling Face" and it is propagated at Nuccio's Nurseries.

The Nuccios caught a very interesting flower and growth habit sport from 'Egao'. It has ruffled pink petals in a semidouble to loose peony form and distinctive zig-zag branches which look like a corkscrew. Thus it is named 'Egao Corkscrew'. A variegated form, 'Shibori-Egao Corkscrew', is also available. Each of these varieties make wonderful bonsai. But what is a "Smiling Face Corkscrew?" Perhaps when the cork remains firmly in the bottle we first see a grimace. Then perhaps we see a smile when the cork is liberated and the wine is poured.

Cheers and "smiling faces" all around.

Editor's note: Check out Brad's pictures on the inside covers.



A smile is the one medium of exchange which is accepted by
city folks and country folks alike.

With plants, persuasion is better than force.
—Elsa Bakatar

Nature soon takes over if the gardener is absent.
—Penelope Hobhouse

No matter how your garden grows,
you will need some tools to keep it going.
—Jack Kramer

CAMELLIA HYBRIDIZERS: WHAT ARE THEY THINKING?

Bradford King
Arcadia, California

What goes through the mind of a camellia hybridizer? Have you ever wondered how the Nuccio family developed more than two hundred new camellias? What does probability theory have to do with John Wang's approach to hybridizing? What did the contrarian thinking of Meyer Piet contribute to hybridizing? How does the thirty five years of experience help Dan Charvet breed landscape camellias? This article focuses on these questions.

The Nuccio family have been growing and hybridizing camellias since 1935. Almost every year they make new introductions; for example this year it is 'Rosy Pillar', a single rose pink medium bloom sasanqua with wavy petals. It is a good landscape choice where width is limited because it grows upright like a column. How have the Nuccio Nurseries introduced so many wonderful show flowers and excellent landscape camellias?

First and foremost this was accomplished through hard work, patience, experience, and the strong ties among this gregarious Italian American family. BUT, what went through the minds of Julius and Joe in the 1940's and 1950's? Well, I can't presume to know. However, when we examine the tremendous body of the Nuccio's work, we discover one very important truth—the great significance of chance. Yes chance! Not luck! This powerful concept underlies the science of genetics. It was highlighted in Darwin's publications on evolution. But what does this have to do with camellias? Nuccio's Nurseries has planted thousands of camellia seeds every year for seventy-three years. Jude Nuccio estimated between 35,000 and 45,000 last year. The goal is to develop a few camellias over the next five to ten years that are good enough

to offer to the public. This is the power of chance and the genetic variability that lies within a seed.

The most common listing in the Camellia Nomenclature of the thousands reviewed is "chance seedling." The second most common is "chance seedling—insert the name of a camellia." This leads us to ask, what is a chance seedling? I could say the result of Mother Nature. However, if we apply the first sex education lesson it would be the "birds and bees." Specifically, the pollen from one flower is transferred to a second flower by bees, insects and hummingbirds. This becomes the seed parent. If a seed pod develops and the seed within is allowed to germinate a "chance seedling" with unknown parentage is the outcome. A camellia grower who harvests many unidentified seeds and germinates them may have hundreds of chance seedlings. It is nature's way of developing new plants. It is the original and most basic method of hybridizing. Since it works, it continues to be used.

A "chance seedling" of (insert name of a camellia here) is also accomplished the natural way—through the birds and bees. However, in this case the grower keeps track of the name of the seed parent until it blooms which could take up to ten years. This is a simple idea and simple to accomplish with a plant label. However, "Lady Luck" may interfere over the ensuing years. For example, your grandson playing in the garden removes the labels and proudly presents them to you. Or a Santa Ana windstorm in February knocks over most of the three year old seedlings and blows the tags all around. Or a skunk looking for grubs overturns a hundred five year old plants leaving the labels in a random mess. Now you have a "chance

seedling" of unknown parentage.

An excellent example of Nuccio's hybridizing is their work with 'Tama-No-Ura'. They were aware that the genetic white border was a unique and appealing trait of this japonica. Is the picotee border an inherited trait? The answer was a resounding "Yes!"

They collected hundreds of seeds from 'Tama-No-Ura' and germinated them. The final result was the introduction of nine varieties with white borders. These are "chance seedlings" of 'Tama No Ura' because the seed parent is known but not the pollen parent.

The Nuccios have used chance and maximized its potential with hard work, experience and years of dedication. This is not luck. It is harnessing the power of genetic variability to produce new camellias.

Chance is part of probability. How do we improve on chance? John Wang, of the Northern California Camellia Society, best articulates probability theory in his writings, talks and hybridizing program. As he says, if one throws four dice each with a six on every side, it would take over a thousand trials to get all of the sides to come up with a six. Therefore, if each die represents one of the following flower characteristics—color, flower size, petal appearance and flower form—this illustrates the low probability of developing a new camellia. John wants to increase the probability of producing unique and distinctive camellias. These are his recommendations.

First, think like an artist in the midst of the creative process so you can envision the new bloom.

Second, set clear hybridizing objectives.

Third, select parent plants that have the characteristics of your objectives.

Fourth, screen parent plants thoroughly to ensure that the seed parent sets seed.

Fifth, be disciplined. Specifically,

repeat the identical crosses to produce many seedlings, germinate all of these seeds from controlled crosses, and cultivate all of them until they flower.

The following is an illustration of how I understand what John Wang is saying. First, in my mind's eye I see a very large rose reticulata bloom with wavy petals and a white border growing on a substantial plant. This is my artistic vision and my objective. There are no genetic white borders, to my knowledge, on any reticulata hybrid. Thus, if my objective is obtained, the flower would be unique and distinctive. What seed parents fit the objective? I am considering 'Margaret Davis' or 'Tama Americana'. They are both beautiful rose red medium flowers with white borders that grow well. 'Margaret Davis' is visually preferable with its more complicated peony flower form and show-winning successes, but it doesn't set seed or have much, if any, pollen. I would, therefore, choose the semidouble 'Tama Americana' as it sets seed and has pollen. We need a second parent with traits fitting our objective. It must be a reticulata but it won't have a white border because that trait doesn't yet exist. In my opinion 'Frank Houser' fits the objective. It is rose red, very large, semidouble to loose peony flower with rabbit ears, has a vigorous open and upright growth habit, sets seed and has an abundance of pollen. In this illustration either parent can be seed parent or pollen parent which should increase the probabilities for success if we remain disciplined and follow John Wang's recommendations.

This recipe for increasing probability is a hallmark of John Wang's successful hybridizing program. However, Meyer Piet portrays a different point of view by what I call his "contrarian" thinking. The problem-solving skills Meyer developed in the aerospace industry undoubtedly contributed to his

success as a camellia hybridizer. He was a non-linear thinker, one who could think outside the box. Meyer Piet reasoned that, since popular easy-to-cross camellias when crossed with each other resulted in uninteresting flowers, they were a waste of time and space to cultivate to get results. Meyer reasoned that using difficult, non compatible crosses could produce unique seedlings. Therefore, he picked *C. granthamiana* to use as a seed parent. It is a large single white specie that is not usually compatible with other camellias. In addition, it takes up to a year for seeds to germinate even in a green house. This contrarian line of reasoning led to a brilliant red bloom with white speckles and large rabbit ears when he crossed 'Crimson Robe' with *C. granthamiana*. He named this *C. reticulata* hybrid 'Sean Armijo'.

The themes of chance, probability, scientific reasoning, and creative problem solving are all part of a camellia hybridizers mind set but so is the accumulation of knowledge gained through experience. Dan Charvet's thirty-five years of experience breeding camellias for the landscape highlight this significance. Dan is from Fort Bragg in Northern California where the average summer high is 65°F. He discovered that *C. japonica* do not set seed in these low temperatures. He also found that *C. reticulata* will set flower buds and set seed in very low heat. Therefore, *C. reticulata* and its hybrids became the basis of his program. He focused on breeding landscape camellias that are

self-grooming, look good in bloom, have attractive foliage, are strong and vigorous and have deep roots that enable the plant to conserve water. Toward these ends he developed his own seed plants.

Based on this data and experience Dan offers several important insights. First, contrary to what many of us have learned, *C. reticulata* hybrids are not difficult to root. Second, it is not necessary to use the highest quality of parents. Dan writes, "I have two very productive seed parents of *C. pitardii* var. *yunnanica* x *C. yunnanensis* each of which, based on their morphology alone, are worthless as garden plants." He reports that when these plants were crossed with a fragrant F2 cross of *C. japonica* 'Crimson Robe' x *C. fraterna* the results were seedlings in various forms, sizes and colors.

Experience and a willingness to experiment are common factors with all of these successful hybridizers. They all also share a passion for camellias and dream of better varieties. An additional similarity is their profound belief in the genetic variability of camellias especially when the lesser known species are part of a hybridizing program.

In conclusion, we have had a glimpse into the minds of several hybridizers. The importance of chance, probability, genetic variability, discipline, non-linear thinking and experience when woven together into whole cloth are the thinking processes of a camellia hybridizer.

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ANOAKIA Bradford King Arcadia, California

What does Anoakia mean? What is happening on Anoakia Lane? What has this to do with camellias?

Anoakia is the name of Lucky Baldwin's estate in Arcadia California. The mansion was built in 1914 on nineteen acres. Lucky named it for his daughter Anita. Anita-under-the-Oaks-in-Arcadia, which translates to "Anoakia." Anita Baldwin converted the estate into The Anoakia School for Girls; however, the school closed in 1990. The building was razed in 2000 after the city voted to have it declared of historic value. Thirty-one luxury homes were built in its place. Is anything being left to help us remember those early days in California? For one positive thing, a beautiful mural depicting elves at play, painted by the noted artist Maynard Dixon, was removed in large sections from the children's play room and donated to the University of Southern California for safe keeping and the enjoyment of future generations.

What is happening on Anoakia Lane? Anoakia Lane is a lovely cul-de-sac on the north side of Anoakia Estate. This is where Bev and Meyer Piet raised their family. This is also where Meyer Piet and Lee Gaeta hybridized and grew hundreds of camellias from 1970 until 1995. In fact, they introduced thirty-seven new camellias—twelve japonica, nine non-reticulata and sixteen reticulata. The most well known are their reticulata. 'Arcadia' is a very large reticulata with salmon pink blooms named for their hometown. 'Larry Piet' is a large to very large formal double to peony form flower named for one of their two sons. 'Emma Gaeta', named after Lee's wife, is a rose red bloom which is especially beautiful in its variegated form. They named a very dark red bloom for Meyer's wife Bev. 'Bev Piet' is a strikingly beautiful flower when

variegated as the white patches contrast with the dark red petals. To get something different they took about a thousand controlled crosses using 'Flower Girl' to create a major color break with 'Fiesta Grande'. The result is a light lavender speckled white medium-sized flower with a long booming season.

What will happen to these thirty-seven named varieties and one hundred unnamed seedlings that are fifteen to twenty five years old? Most likely they will be destroyed by a new owner to build what I call "the Arcadia starter castle." Bev Piet and I want to save as much of the plant material as possible for future generations of camellia lovers. Unlike the Maynard Dixon mural in the Anoakia estate we have no benefactor willing to donate funds to remove and relocate plants to a museum or public garden. However, some steps have been taken to save the collection. Rudy Blanco, who worked with Piet and Gaeta, has helped identify the varieties. Robert Ehrhart will seek to save a special camellia named 'Bessie Dickson'. This is a cross between two scented white japonicas—'Nioi-Fubuki' ("scented snow storm") and higo 'Aki X Aki Fragrant'. This cross produced a fragrant anemone form medium white flower.

We have also provided scions for grafting to Nuccio's Nursery in Altadena, California and Gene's Nursery in Savannah, Georgia. I have grafted twenty named varieties for Bev Piet and myself. Bev wants to take some of her favorites to her new home in San Diego, one of which is one of my favorites as it is of my wife Lynn. We had never seen it until Bev showed it to us. It is a medium anemone form red japonica with pink and white stripes aptly named 'Razzle-Dazzle.'

George Harrison will try his green thumb at growing 'Kristie Piet' plus two unknown seedlings and 'Bev Piet Smiles'. Piet never introduced 'Bev Piet Smiles'; however it was registered with ACS in 2008. It is described as a dark red and white semi double to peony medium bloom with a long lasting blooming season that begins in midseason. It is average height and upright in growth habit.

Meyer and Lee named twenty-eight of their introductions after family and friends including a large to very large dark red semi double bloom with high wavy petals named 'Lee Gaeta'. I have

transplanted one unnamed reticulata seedling from Anoakia Lane that is upright and average in growth and has



Bev Piet with 'Bev Piet'

large pink flowers with lavender tones and wavy petals. If it thrives, and with Bev's blessing, this camellia will be named 'Meyer Piet' to honor the late Meyer Piet.

We certainly respect and honor the thirty years of friendship, collaboration and passion that Piet and

Gaeta had for camellias. It is our hope that our recent collective efforts will provide plants for future camellias growers and keep alive their legacy.

Photo by Brad King

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Don't count the days, make the days count!

No race can prosper until it learns there is as much dignity
in tilling a field as in writing a poem.

—Booker T. Washington

Early to bed, early to rise,
Work like hell; fertilize.

—Emily Whaley, Charleston, N.C.

UNDER THE OAKS AT DESCANSO GARDENS

Bradford King
Arcadia, California

Did you know that Descanso Gardens in La Canada/Flintridge has the largest collection of camellias in North America?

The more than 30,000 camellia plants are in a California native habitat growing under a canopy of Coastal Live Oaks.

The Camellia Forest is the signature collection at Descanso Gardens with a blooming season from fall to sprig, peaking in February. However, the gardens offer its 300,000 visitors a year much to enjoy through out the year. In spring, the tulips and daffodils poke their heads sunward giving locals a taste of an East coast spring. The nine acre California Garden is

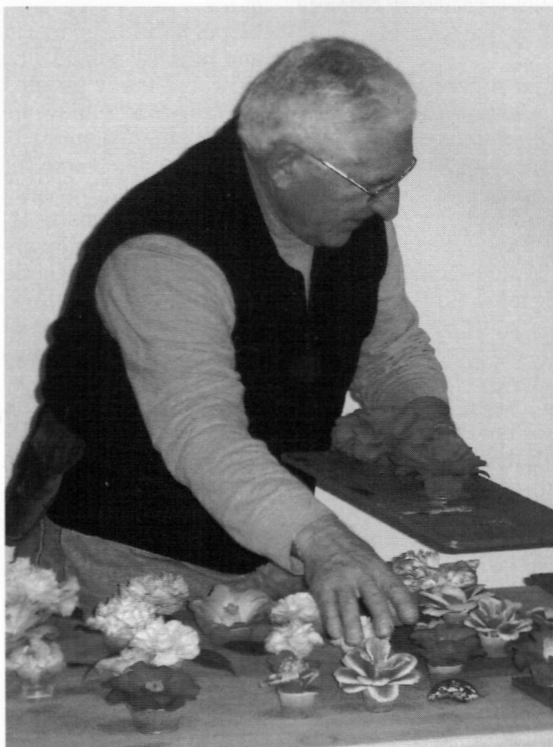
planted with tough native plants against a backdrop of chaparral covered hills. Theodore Payne, a noted horticulturist, designed it to illustrate what Southern California looked like before it was developed for ranching, citrus crops and homes.

The Rose Garden was begun by Dr. Walter Lammerts in the mid 1940 s. He and Manchester Boddy, the owner

of Rancho del Descanso as it was called then, envisioned a rose garden that reflected the history of the rose. The five acre rose garden was revitalized in 1994 with new rose arbors, additions to the collection such as the Austin roses, keeping the historical theme intact.

However, the camellia is Queen of

the Descanso Gardens. In 1937 Manchester Boddy purchased 125 acres of land in La Canada where he raised cattle and began planting camellias with the intention of developing them for the cut flower industry. By 1941 he had amassed a collection of 600 camellias. He and his family lived in a 22 room mansion built in the then popular Regency style.



We see Southern Cal President Brad King in this position a lot during the camellia shows in Southern California.

As the camellia collection continued to expand, Boddy hired J. Howard Asper, a camellia specialist, as curator and chief propagator. Together they developed a commercial camellia plantation to serve the cut flower industry. Camellias became the flower of choice for corsages for the well-dressed ladies of the time.

Boddy added 60,000 camellias to his inventory during the forced relocation of Japanese Americans to internment camps during World War II. Boddy was an admirer of Asian culture and the Japanese in America. He purchased the entire inventory of two Japanese camellia growers when they were forced into the camps. J. W. Uyematsu owned and operated Star Nurseries which was the largest and most successful in California and F. W. Yoshimura whose Mission Nursery continues today as San Gabriel Nursery.

Howard Asper supervised the planting of thousands of these camellias beneath the oaks of Rancho del Descanso. He grafted dozens of varieties onto Eureka rootstock to enlarge the camellia plantation that served their cut flower business.

In 1945 Dr. Walter Lammerts, of rose hybridizing fame, joined Boddy and Asper at Descanso. They admired the giant flowers of camellia reticulata varieties of 'Pagoda', 'Captain Rawes', 'Shot Silk' and 'Lionhead'. They envisioned hybridizing with them but none were available outside of China.

Dr. Lammerts was able to identify a botanist in the Yunnan Province of China who might be able to help. In early 1948, Professor T. Tsai, at Kuming Institute, wrote that 20 different cultivars of *C. reticulata* were available. These 20 varieties were shipped to San Francisco, but only 15 survived.

Ralph Peer of Los Angeles also imported twenty plants of which only three survived. Fortunately, two of these that made it were cultivars that Descanso didn't have. Apparently, some of the fifteen original survivors were duplicates so Descanso Gardens imported a further shipment of

reticulata that resulted in fourteen new and different cultivars available in the west.

C. reticulata thrived in Southern California and today Descanso Gardens maintains many of the original reticulatas from Yunnan China.

Wayne Walker, chief horticulturist, provides a very lively and interesting walking tour of the camellia forest. When he was my guide, I saw a very large salmon pink bloom hybridized by Howard Asper and proudly named after himself. However, many people believe that the crowning achievement of Asper's career was 'Valentine Day', a large formal double bloom that also is salmon pink. The legacy of Boddy, Asper and Lammerts as camellia growers and hybridizers continues today at Descanso Gardens. This is illustrated by the following *C. japonica* found in the gardens. 'Bernice Boddy' is named for Manchester Boddy's wife. It is a lovely medium semidouble pink with deeper pink tones under the petals. 'Mrs. D.W. Davis Descanso' is a sport of 'Mrs. D.W. Davis' discovered in 1970 at Descanso Gardens. It is a blush pink very large peony flower that continues to be seen at camellia shows today.

Descanso Gardens has earned accreditation as a museum of living collections from the American Museum Association. In 2001 The International Camellia Society recognized Descanso Gardens as an International Camellia Garden and this year Descanso is celebrating its 50th anniversary of its founding as a public garden.

Descanso Gardens is a peaceful place to visit and enjoy a stroll through its acres of camellia forest.

Every garden is unique with a multitude of choices in soils, plants and themes. Finding your garden theme is as easy as seeing what brings a smile to your face.

- —Teresa Watkins, *Gardening With Soul*

YELLOW CAMELLIA

Bradford King
Arcadia, California

Camellia lovers have been waiting for a large yellow camellia since *C. nitidissima* was discovered in China in the 1960's. This discovery created great excitement in the camellia world because the bloom can be a deep golden yellow. Unfortunately, the next 40 years did not bring the hoped for success.

A few early introductions offered promise. Two of the partial successes are seen at camellia shows today. They are 'Dahlohnega' and 'Brushfield's Yellow'. 'Dahlohnega' is a small to medium formal double creamy white to a pale yellow. It blooms midseason on a nice plant with lovely gray bark. 'Brushfield's Yellow' has antique white guard petals surrounding a double center of pale yellow petaloids. It is a medium anemone formed flower.

Julius Nuccio detailed the difficulties faced in hybridizing with *C. nitidissima* (formerly called *Chrysanth*) in the 1995 Vol. 56 *Camellia Review*. He reported a successful cross between a hybrid 'Guilio Nuccio' x *C. pitardi* with *C. nitidissima* that resulted in two seed pods which netted 5 seeds. Three seeds germinated from one pod. These were grafted on large root stock. They were labeled as 'Honeymoon', 'Golden Glow' and nxo#8728. Yellow was

present when they bloomed which gave them great confidence that developing a yellow camellia would be easy. They reasoned that back crossing would add more yellow. These three hybrids had many different characteristics with the common denominator inheriting the undesirable split stigma typical of *C. nitidissima*. This makes hybridizing very difficult. Julius Nuccio reported some success with back crosses from 'Golden Glow'. They harvested three pods which netted seven seeds with four germinating. These were grafted on large root stock. The resulting blooms were a great disappointment. Julius wrote "Not one of the above F2s proved to be as good as our first crosses". He also reported that out of several hundred control crosses there were 88 pods that developed when *C. nitidissima* was used as the seed parent. They found it difficult to predict when buds should be emasculated and that emasculation was also difficult to accomplish. They determined that 45 of the 88 were the result of self pollination which left 43 controlled crosses. These results led them to abandon using *C. nitidissima* as a seed parent. He closed the article stating that the progress toward a major color break toward the yellow has not been forth coming.

This evaluation is echoed by other experts. According to Dr. Ackerman, the yellow genes are recessive to all other color genes, even white. In addition, he reports that the interspecific crosses are very difficult with F1 hybrids sterile. Gao, Parks and Du (2005, p.112) state, "It (*C. nitidissima*) has been widely used in breeding programs, but it is nearly incompatible with other camellia species."

While my experience is limited to using pollen from *C. nitidissima* variety micarpa to a good seed parent such as 'Betty Sheffield Coral', I had no "takes." This increased my respect for the few hybridizers who have been successful in their attempts.

Mr. Tadao Yamaguchi of Ishikawa, Japan is a pioneer in developing yellow Camellias and has developed 'Shoko', 'Kicho', 'Kiho', 'Ki-No-Gozan' and 'Senritsu-Ko'. In my opinion his best introduction is 'Ki-No-Senritsu' (Yellow Melody). This light yellow medium flower is loose to full peony in form. Nuccio's Nurseries expects to have all of these yellows for sale in 2008.

I have another of Yamaguchi's crosses with *C. nitidissima* 'Ki-No-Joman'. It has a lovely small salmon pink single flower. It bloomed profusely on a bushy, vigorous growing upright plant. I used it as a pollen parent this year. One of ten attempts took with *C. japonica* seed parents and all six tries failed to cross with *C. reticulata*. Currently, I have one seed germinating from these crosses off 'Tama-No-Ura'. 'Ki-No-Joman' has not set any seeds from controlled crosses or when flowers were left for the bees to pollinate. This leads me to believe it is sterile which again supports the difficulty with *C. nitidissima* crosses even when there is japonica in their genetic background.

Mr. Kazuo Yoshikawa of Osaka, Japan has pursued many avenues in his goal to produce yellow Camellias. He has used *C. saluenensis* hybrids, *C. reticulata* hybrids, *C. japonica* and *C.*

sasanqua. Nuccio's Nursery has four of his crosses: 'Ki-No-Moto #92', 'Ki-No-Moto #95', 'Kogane Nishiki', and 'Kogane-Yuri'. Currently I grow the later two and have enjoyed the first flowers on each. While I expect them to be sterile, I will experiment to see if this is true. Yoshikawa has also introduced 'Kagiroi' one of the deepest crosses to date. It is a formal double produced by crossing 'Silver Chalice' with *C. nitidissima*. I would agree with Dr. Clifford Parks when he states this is the best yellow camellia to date.

More than forty yellow flowered camellia species have been discovered in China and Vietnam. The booms are generally small (less than 2.5 inches). The color tones range from golden yellow to pale yellow. In my opinion *C. flava* is the best of these for the next round in developing yellow camellias. It is known to cross with *C. japonica*. It develops into a small shapely tree with small leaves. I have several *C. flava* grafts developing. The goal would be to make controlled crosses with medium and large white japonicas. In the mean time, I have been hybridizing with *C.*

tunghinensis. It produces a profusion of small butter cup shaped pale yellow blooms mid to late season. I have frozen pollen to use next year on *C. sasanqua* 'Narumigata' even though my past experience with frozen pollen was a total bust. This year I made 13 controlled crosses on 'Silver Waves' and 'Silver Triumph' using *C. tunghinensis* pollen. Four pods developed three aborted with one still holding on. I also have one pod on 'Tama No Ura' and one on 'Tama Peacock' out of *C. tunghinensis*. I also experimented using *C. tunghinensis* as a seed parent. The flower is small but the pistil is visible and not fused i.e. there are 3 styles which receive pollen. It is very important that during process of emasculation that the styles are not cut or damaged. Currently there are eight be sized green pods developing. However, only one is a controlled cross using pollen from

'Snowman' out of 18 attempts. The bees are more successful with their 7 takes.

In conclusion I have joined the search for the Holy Grail--the yellow

camellia following the lead of Nuccio, Homeyer, Brushfield, Yoshikawa, Yamaguchi, Jury and other hybridizers through out the Camellia world.

Return to TOC

C. TUNGHINENSIS and *C. YUNNANENSIS*

Bradford King

C. tunghinensis grows in ravines and stream beds in Guangxi China between Fangcheng City and Dongxing City. The flower is a small single pale yellow. The leaves are glossy and medium size. The plant is a medium upright with a dense growth habit. The bark is gray brown. It blooms abundantly mid to late season. Research has determined it is a diploid with 30 chromosomes.

Professor Chang places this camellia species in Section *chrysanth*. This section is characterized by yellow flowers with distinct bracts and sepals. The styles are not fused at the base. This species has potential for hybridizing as well as

an ornamental garden plant. It is available at Nuccio's nursery. They recommend growing it in heavy shade to induce an abundant bud set and to show off the yellow flower.

The plant I purchased is robust with many glossy green leaves. It was clearly healthy. However, some leaves looked as if they were coated with gray mildew. According to Jude Nuccio this is typical. They have sent leaves to be examined by a botanical laboratory and no mildew, pests or disease were found. There is no known reason for this anomaly but it was not present on the extensive new growth.



C. yunnanensis was discovered in the Yunnan province of China. The flowers are small, white shading to cream at the center. The 8 to 12 petals are wavy. The abundant flower buds are rusty brown. The seed pods are purplish red that hang like Christmas tree ornaments when mature. Leaves are small elliptic to oval and are serrated on the edge with veining. New growth is described as yellowish. The plant can grow into a small tree with smooth rust brown bark. Research has determined it to be a diploid with 30 chromosomes. Professor Chang places this camellia

species in Section *protocamellia*. This section contains only five species. The common characteristics are white flowers borne singly on the tips of shoots with 8 to 14 petals. The stamens and style are free, e.g. not fused at the base. The seed pods are large with a thick wall. While this species has been used infrequently in hybridizing it has great potential. The flower is fragrant and has been reported to have a very long flowering season which last from fall to spring. It is suitable for mild climates with low humidity.

HYBRIDIZING WITH *CAMELLIA AZALEA*

Bradford King
Arcadia, California

C. azalea was first collected in 1984 by Wei and rediscovered by Gao in the late 1990's. It has some physical characteristics similar to azaleas and is exciting because it blooms from summer to fall and can bloom all year! This makes *C. azalea* a very valuable parent in the search for a continuously blooming landscape camellia. The small flowers are an attractive bright red with 7 to 9 petals. The leaves are long and narrow with rounded tips. They are also smooth including around the leaf edge. The mid-vein is raised. The plant grows into a three-foot shrub that may be two and a half feet wide and, surprisingly, enjoys hot (90 degree) summers. Seeds also may require some warm weather in order to germinate.

Currently I have several *C. azalea* grafts in progress but no plants. I had to acquire *C. azalea* pollen from Longwood Gardens in Pennsylvania. One shipment of pollen was collected July 2006 and shipped to me after my camellias were bloomed out. I froze the two capsules inside a small plastic bag and defrosted them five months later to make controlled crosses with early blooming japonicas like 'Tama-no-Ura', 'Tama-Americana', 'Kramer's Supreme' and 'San Dimas'. I also pollinated *C. sasanqua* 'Dazzler', 'Jean May', 'Shish Gashira' and 'Yuletide'. The failure of these is most likely due to using frozen pollen, but cool weather in December when the crosses were made could also be a contributing factor. Gao has suggested that very warm temperatures may be required for successful fertilization. In *C. azalea*'s native China in Guangdong province, the weather is very hot during August and September when major flower production occurs. Gao recommends that the seed parent remain in a warm environment for ten days or more after pollination.

In late December 2006, I received additional pollen from Longwood

Gardens. Fifty-eight controlled crosses were made. Ten viable seed pods have developed. This success rate of 17 percent is lower than the 25 percent or greater obtained when crossing within species, such as two japonica varieties. For example, 'Magnoliaeflora' pollinated with 'Mrs. George Bell' had a success rate of 60 percent this year.

The crosses I made on 'Narumigata', 'Shishi Gashira' and 'Kanjiro' failed, leaving us wondering if *C. azalea* does or does not cross with *C. sasanqua*. *C. azalea* crosses with 'Cupcake', a non-reticulata hybrid, were successful. However, I have not had the opportunity to cross *C. azalea* with any *C. reticulata* because no mature flower buds have been available when I have had *C. azalea* pollen.

It is known, however, that *C. azalea* crosses are possible with *C. japonica*. My successful seed pods were on 'Tama-no-Ura', 'Tama-Americana', 'Tama Peacock', 'Red Hots' and 'Red Devil' (a sibling of 'Red Hots').

In November 2005 I was given one *C. azalea* flower and from the pollen I made 14 controlled crosses, which resulted in three seed pods. Two developed on 'Tama-no-Ura' and one on 'Egao'. I secured the seed pods in used nylon stockings so that when they opened the seeds would be retained. While collecting the seeds on June 17, 2006 I dropped and lost the last seed from 'Egao'. My tortured cries were heard throughout the neighborhood that day! The two 'Tama-no-Ura' pods opened that day and produced six seeds. I put these seeds in a closed lid plastic jar "greenhouse" composed of moist peat moss and placed the container outside in the shade. The first two seeds germinated in three months. In the middle of September they were each placed in separate one-gallon pots.

They are clearly marked and have received bi-weekly liquid starter fertilizer (Miracle Gro 4-12-4).

Two months later in November I found that two more seeds had germinated and had produced several leaves. These were each placed in one-gallon pots and covered by clear plastic bags to provide protection as well as moisture control. These were not fertilized. Ten months later the final two seeds germinated but lacked adequate size to be potted. I expect that with the warmer weather of late spring and summer that they will develop and become healthy plants.

The four seedlings planted in the fall are each 5 to 6 inches tall with at least three new leaves. The leaves are small but more round than 'Tama-no-Ura' and are similar to their pollen parent *C. azalea*. The leaves also have a smooth surface and edge with a slightly raised mid-vein that is similar to *C. azalea*.

I have concluded that *C. azalea* crosses with *C. japonica* and non-reticulata hybrids. However, it is unclear if it crosses with *C. reticulata* and *C. sasanqua*.

My current crosses indicate that some foliage characteristics are inherited from *C. azalea*. This offers promise and hope for long lasting

blooms.

Dr. Harbage of Longwood Gardens has reported in the 2003 American Camellia Yearbook, page 11. that "At any one time a Camellia Azalea plant can have shoots just beginning a new growth flush, shoots in the middle of a growth flush, shoots completing a growth flush setting vegetative and/or flower buds and shoots with flowers open". "The result of this Asynchronous shoot development is that flowers are continuously produced throughout the year."

Will this continuous growth habit be inherited from *C. azalea*? Will the 'Tama-no-ura' picotee border be inherited? We know that at least eight 'Tama-no-Ura' progeny have genetically acquired the white border. I assume that blooms will be red, but what shade? I expect a small single flower, but what shape? The major mystery is still to be discovered—will they bloom continuously? I have hope! Now I hope to have the patience and resolve to care for them for the next seven years in order to find the answers to all these questions.

Editor's note: Our cover photo was taken by Gene Phillips in June when the temperature was almost 100° in Savannah, Georgia.

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THE FRONTIERS OF CAMELLIA HYBRIDIZING

PART II

Bradford King
Arcadia, California

CLUSTER-FLOWERING HYBRIDS

The fine-leaved miniature cluster flowering hybrids have been popular with hybridizers since 1948 when J.C. Williams received an Award of Merit from the Royal Horticultural Society for 'Cornish Snow'. Hybridizers have found *C. rosaeflora* useful for developing pink flowers, *C. fraterna* for cluster flowers, *C. tsaii* for wavy leaves and *C. japonica* 'Kuro-tsubaki' for its black-red color.

Neville Haydon from New Zealand to continue the process of developing new miniature hybrids crossed *C. rosaeflora* with *C. tsaii* to get 'Baby Bear' and 'Baby Brother'. In 1999 Nuccio's Nursery introduced 'Bunny Ears', a miniature pink semi double *C. rosaeflora* hybrid with "rabbit ears." Tomas Savige of New South Wales also used *C. rosaeflora* to develop fine hybrids including 'Wirlinga Princess', 'Wirlinga Bell' and 'Wirlinga Bride'.

In the 1990's Ray Garnet introduced the two *C. transnokoensis* hybrids, 'Sweet Jane' and 'Trans-tasman' that have clusters of blooms.

The frontier is to develop hybrid camellias with abundant cluster flowers that excel in the landscape and have distinctive qualities such as scent, yellow or apricot colors, unique foliage or a continuous blooming season.

There are several camellia species that have potential for hybridizers that may result in crosses with a combination of desirable characteristics. *C. transnokoensis* is a small abundant blooming white scented flower that often displays an attractive red spot on the petals. Crosses with larger flowers could make for excellent landscape varieties.

A hybridizer interested in developing yellow cluster flowers should explore *C. tunghinensis* as a parent because it produces single, small pale flowers in abundance.

Breeders seeking a very long or continuous flowering season could find *C. yunnanensis* a sound choice. It produces a small to medium white flower, has small and finely textured leaves, some scent and can set abundant buds. Its seed pods are purple-red and hang like Christmas tree ornaments when fully mature. Because it requires less humidity than other species it should do well in Southern California' inland climate areas. Since it has not been used extensively in hybridizing, its full potential has yet to be discovered.

A hybridizer seeking to use a larger flower with a lovely red flower should consider *C. chekiangoleasa*. It sets seeds readily and can be either a seed or pollen parent. While not a cluster type bloomer, it does have lots of flowers. In addition, it is reported to be resistant to common diseases, has cold tolerance and grows into a small tree. Japanese hybridizers have successfully crossed it with *C. japonica* to produce excellent red flowers. It has the same number of chromosomes as *Japonica* ($2N=30$). Hybridizers such as Dr. Parks, Gene Phillips and Tom Nuccio speculate that color breaks are possible from this species. Therefore, this species is a very strong candidate for a hybridizing program.

FOUR SEASON BLOOMS

Is four-season-blooms the final frontier? To my knowledge no one has reported developing a camellia hybrid that can bloom all year long. However, it is a real possibility. Gao, Parks and Du have identified a number of species that have very long if not continuous flowering seasons. The most promising species for this objective are *C. amplexicaulis*, *C. azalea* and the previously discussed *C. yunnanensis*.

C. amplexicaulis, a purplish red cupped flower with a very narrow white margin, blooms mainly in the summer and autumn. Under optimal conditions, it can bloom at any time. The petals are thick and fleshy and stamens are yellow and clustered and produce quantities of pollen. It has very large glossy dark green leaves. It sets seeds readily; therefore, it is an excellent candidate for hybridizing as either a seed or pollen parent.

The strongest candidate for producing four-season blooming hybrids is *C. azalea* with its single bright red flowers and bright shiny green leaves. *C. azalea* gets its name because it resembles the evergreen azalea and is compact, upright and dense in its growth pattern.

Gao Jiyin (American Camellia Yearbook 2005, p.61) wrote, "I have visited the native place of *C. azalea* four times (May, August, October, and January) and I could see the bright flowers of the species each time." Dr. James Harbage (2003 yearbook, p. 10) said "*C. azalea* has bloomed in virtually every month of the year here at Longwood Gardens (Pennsylvania)". He explains that this ever blooming ability is due to the fact that the plant can have shoots just beginning a new growth flush, shoots in the middle of a growth flush, shoots completing their growth that are setting buds and shoots with flowers. This asymmetrical growth pattern is unusual for camellias because the typical camellia has one or two growth flushes a year with the vegetative growth and flower buds developing about the same time. Dr. Harbage also reports in the same article that rooted cutting of *C. azalea* were significantly less successful than grafts. The grafted plants grew normally in producing

new foliage but at a slow rate. They had not had seeds set for them as of 2002. Therefore, they consulted with Professor Gao. He suggested that very warm temperatures might be required for successful fertilization.

On December 9, 2005 I received one *C. azalea* flower bud which had a small amount of pollen. I immediately made the following controlled crosses: 5 on 'Tama-No-Ura', 3 on 'Egao', and 1 on 'Tama Peacock'. In early June I had 3 seed pods growing well on 'Tama-No-Ura' and 1 on 'Egao'. On June 17 two seed pods opened on 'Tama-No-Ura'. Each had three seeds. These are the first pods to open this season. The third 'Tama-No-Ura' pod was missing and the 'Egao' pod was still green. All of these pods are the size of a thumbnail which is smaller than most of the other pods crossed with the varieties on 'Tama-No-Ura'. Therefore, crosses between *C. azalea* and *C. japonica* are indeed possible. However, I need to see if the seeds will germinate and to wait 7 years to discover if a long blooming season has been genetically transferred to any of the hoped for seedlings.

While it is difficult to obtain *C. azalea* plants, Longwood Gardens has pollen available for distribution to camellia hybridizers. I wrote and received pollen from Alan Petravich, Longwood Gardens, Horticulture Conservation Rd., Kennett Square, PA. 19348.

CONCLUSION

C. japonica has diversified into over 30,000 cultivars in many different sizes, forms and colors. The frontiers of hybridizing are in tapping the genetic potential of the camellia species.

You can bury a lot of troubles
digging in the dirt!

In the garden, my soul is sunshine.

Between the Pages: A Book Review
The Collected Species of the Genus Camellia
An Illustrated Outline by Gao, Parks and Du Yueqiang
Bradford King
Arcadia, California

This 302-page book, published in 2005, is written in English and Chinese. The authors' two stated purposes for writing this beautifully illustrated book are that they wanted to "bridge the gap between scientific studies and the horticultural interest of gardeners" and to provide an illustrated outline of 199 camellia species of the estimated 280 in this genus.

The book is readable for an experienced gardener or for a camellia enthusiast willing to learn some scientific definitions. The technical chapter titled, "Explanation of Botanical Terms" is a helpful four pages of reference material that is needed in order to understand the botanical descriptions provided for each of the species discussed. There were numerous scientific definitions unfamiliar to me and this initially made reading it a challenge. Camellia fruit or sepals were described as "globase" and I learned that "globase" means "spherical in shape." The more familiar I became with the scientific definitions the more readable I found the individual species descriptions. These technical descriptions are more challenging than *Camellia Nomenclature* or Nuccio's Nursery catalog.

The main body of the volume describes 199 camellia species and is arranged in 19 sections based on the classification system developed by Professor Chang. The sections and species are arranged alphabetically. The distribution and botanical characteristics of each specie are reported in succinct (300 words) scientific detail and include some general comments. Most species are illustrated with excellent color photographs visually representing the technical language descriptions.

For example, section "Archecamellia" has three wonderful photographs of *C. amplexicaulis*. One 3x4 photograph features two blooms, numerous buds in different developmental stages and a close-up detail of a cluster of leaves. The second photo is a 5x7 close-up of a single bloom with the leaves providing an impressionistic background. The third photo is a 6x7 of a wide-open bloom and a second partially opened flower with 8 leaves that visually demonstrate the characteristic elliptic and oblong-elliptical shaped leaves with serrated edges.

The combination of technical language and outstanding photographs brings each species to life whether the

reader is a cognitive or visual learner. The written text also has appeal to camellia lovers with a technical and scientific bent who are interested in collecting or hybridizing camellias. As the authors proposed, the book bridges the gap between science and gardening. In addition, the aesthetic beauty of the volume is outstanding. The high quality glossy paper helps to showcase the extensive color photography making every page a visual and informative pleasure. For example, the picture of *C nitidissima* in the Chinese language section of the

second forward shows two bright yellow cup blooms with their typical waxy texture and dark golden stamens against a background of dark green leaves with patches of white.

While this book is much more than a "coffee table" illustration of camellia species, it is visually in the same league as the best of this genre. Whether the reader is a visual learner, a lover of flower photography or a serious camellia grower, this illustrated volume will provide years of enjoyment "between the pages."



ANNOUNCING A NEW BOOK BY DR. WILLIAM L. ACKERMAN

Beyond the Camellia Belt: Breeding, Propagating and Growing Cold-Hardy Camellias will be released by the time you receive this Review. Gardeners seeking to adorn landscapes in more northerly climates with delicate camellia blossoms will learn how to in this comprehensive guide. Following a brief history of the genus camellia and the breeding process which has enabled strains to survive in colder climates, this guide outlines the steps to success—from siting, planting and fertilizing to pruning, propagating and controlling pests and diseases. Besides offering a wealth of time-tested advice—from one

who for more than 40 years has mounted extensive research in the cultivation of camellias suitable for areas outside of their natural habitat and has had a type of camellia named after him—this handbook provides a list of camellia varieties that will thrive in zones five and six, as well as appendices identifying camellia societies, nursery sources, collections and suggested readings.

Editor's note: We have appreciated the work that Dr. Ackerman has done identifying cold-hearty cultivars and feel this information should be of interest.

CAMELLIA STATIONERY

Our beautiful camellia notecards are still available in sets of eight for \$6.00 including tax and shipping. Folks who use them and re-order tell us how truly lovely they are. They make wonderful gifts for your fellow camellia lovers or those you are trying to get interested in this great hobby! You can even order them for your own use. They also look beautiful in frames. Cards can be ordered through Dorothy Grier, 13229 Pipeline Avenue, Chino, CA 91710 (909) 628-1380. Make your check payable to SCCS.

If any camellia society would like to use these cards as fund raisers, orders for 25 or more sets are priced at \$5.00 each, including tax and shipping.

THE FRONTIERS OF CAMELLIA HYBRIDIZING—PART I

Bradford King
Arcadia, California

Successful businesses and health and educational institutions spend time and effort developing a strategic plan. A camellia hybridizing program also needs a strategic plan and a key initial step is to articulate a vision.

VISION

In 1978 Julius Nuccio of Nuccio's Nursery in Altadena, California shared his vision for hybridizing. "It is every camellia grower's dream to develop a camellia with the foliage of *C.*

japonica, the vigor and exposure range of *C. sasanqua*, the fragrance of *C. lutchuensis*, the flower style of a large *C. reticulata*, the mass bloom of *C. saluenensis* and, of course, yellow." His vision statement holds true today.

PROGRAMS

Most of the hybridizing in the past focused on developing better landscape plants or beautiful new show flowers. These programs have been very successful in developing blooms of many sizes, forms and

colors and the results of these efforts can be seen in the camellia shows throughout the world. According to Jude Nuccio, Nuccio's Nursery plants 25,000 seedlings a year in the hopes of marketing two or three new varieties during the next seven to ten years. This high volume of chance seedlings has helped Nuccio's offer over 200 wonderful new camellias over the past 70 years. We expect hybridizers to continue to be interested in developing new show and landscape camellias.

OBJECTIVES

A hybridizing program begins with a specific objective. For example, three years ago when I began my adventure into hybridizing, my objective was to develop a large dark red camellia with white borders. I chose 'Tama-No-Ura' as the seed parent because it sets seeds readily and blooms profusely. The white border of this small single red flower has shown to be transmitted genetically to some of its seedlings. In order to have some chance of getting a large dark red flower, I knew the pollen parent should have these qualities. I did controlled crosses with pollen from large red blooms of 'San Dimas', 'Grand Prix', 'Grand Slam', 'Glen 40', 'Royal Velvet' and 'Bob Hope'. Of course I am still waiting for the 100 plus seedlings I propagated to bloom in order to evaluate their progress toward my objective.

FRONTIERS

The most important frontier for camellia hybridizing is for blooms that are either yellow, fragrant, clustered or that flower all year long. The development of cold hardy camellias is also a significant hybridizing frontier. As a Southern California resident it is not a program that interests me. However, as a camellia enthusiast, I respect and value this objective and applaud the pioneer work of Dr. Clifford Parks and Dr. William Ackerman in the development of cold hardy camellias.

Dr. Parks concentrated on intraspecific crosses with *C. japonica* and developed cold tolerant cultivars such as 'April Blush', 'April Dawn', 'April Remembered', 'April Rose', 'April Snow' and 'April Tryst'. Dr. Ackerman focused his program on crosses of *C. oleifera* with fall and spring flowering cultivars and developed fall bloomers such as 'Snow Flurry', 'Polar Ice', 'Winter Beauty', 'Winter Hope', 'Winter Interlude' and 'Winter Rose'. Dr. Ackerman's spring flowering variants include 'Fire 'n Ice', 'Ice Follies', and 'Spring Frill'. In the 2005 *American Camellia Yearbook*, Dr. Ackerman reported he had a total of 51 named cold hardy hybrids as a result of his 45 years of research.

YELLOW CAMELLIAS

When *C. nitidissima* (formerly *C. chrysanth*) was discovered in China in the early 1980's it created much excitement and promise for camellia breeders in their quest to develop large yellow blooms. Unfortunately, the next 30 years did not bring the hoped for success. According to Dr. Ackerman, the yellow genes are recessive to all other color genes, even white. In addition, he reports that the interspecific crosses are very difficult with F1 hybrids. Gao, Parks and Du (2005, p.112) state, "It (*C. nitidissima*) has been widely used in breeding programs, but it is nearly incompatible with other camellia species."

While my experience is limited to using pollen from *C. nitidissima* and *C. microcarpa* crosses to good seed parents such as 'Betty Sheffield Coral', I had no "takes" at all. This increased my respect for the few hybridizers who have been successful in their attempts.

Mr. Tadao Yamaguchi of Ishikawa, Japan is a pioneer in developing yellow camellias. He has developed 'Shoko', 'Kicko', 'Kiho' and 'Ki-No-Gozan'. Two of the *C. japonica* seed parents are unlisted in the Southern California 2006 *Camellia Nomenclature*. The other two are

listed in the 1996 *Camellia Supplement*. They are both white flower producing plants. 'Hatsu-Arashi' or 'First Storm' is a 1935 small single from Japan and was the seed parent of 'Kicho'. 'Hakuko', a medium peony form plant, served as the pollen parent with *C. nitidissima* as the seed parent for 'Kiho'.

I have another of Yamaguchi's crosses with *C. nitidissima* 'Hi-No-Joman', a lovely small salmon pink single flower. It blooms profusely on a bushy, vigorous upright plant. I used it as a pollen parent this year. One of my ten attempts took with *C. japonica* seed parents but all six tries failed to cross with *C. reticulata*. Currently, I have one seedpod growing from these crosses on 'Tama-No-Ura'. This exceptionally low take supports the difficulty with *C. nitidissima* crosses even when there is *C. japonica* in their genetic history.

Mr. Kazuo Yoshikawa of Osaka, Japan has pursued many avenues in his goal to produce yellow camellias and has used *C. saluenensis* hybrids, *C. reticulata* hybrids, *C. japonica* and *C. sasanqua*. Nuccio's Nursery has four of his crosses: 'Ki-No-Moto #92', 'Ki-No-Moto #95', 'Kogane Nishiki', and 'Kogane-Yuri'. He has also introduced 'Kagirohi' one of the deepest crosses to date. It is a formal double produced by crossing 'Silver Chalice' with *C. nitidissima*.

The frontier in developing a yellow camellia is to use one of the 38 yellow flowered camellias besides *C. nitidissima*. My investigation into these yellow camellia species leads me to recommend two potential candidates. My top pick is *C. flava*. According to Gao, Parks and Du, it hybridizes readily with *C. japonica* and develops into a small shapely tree with small leaves. The yellow flower is small (1 1/2" to 2") with a large number of petals. My second choice is *C. euphlebia*. Gao, Parks and Du (2005, p.95) state, "This species is fast-growing, tolerant of a wide range of growing conditions,

and resistant to disease. It is an excellent garden and landscape plant for mild areas and may be useful in breeding programs."

Most hybridizing programs seeking to produce fragrant camellias have used *C. lutchuensis*, *C. fraterna* and *C. tsaii*.

The last forty years has brought some success, but further work is needed. Nuccio's 2005-2006 catalog lists only 10 fragrant camellias. Nuccio's best fragrant introduction is 'Scented Gem', a miniature fuchsia-pink anemone form with white petaloids.

One avenue hybridizers followed was to use cultivars with a slight scent such as 'Kramer's Supreme' paired with *C. lutchuenensis* hybrids. The best example is 'Ach-Scent' a shell-pink full peony medium with a deep spicy fragrance introduced by Dr. Ackerman in 1978. Japanese growers concentrated their efforts using scented Higo *japonica* camellias. A notable fragrant parent is 'Nioi Fubuki' or 'Scented Storm'. This white flower with carmine-colored stripes is a typical Higo form with 150 pale yellow stamens.

Jim Finaly of Whangarei, New Zealand may have had the most successful fragrant camellia program thus far. Three of his best are 'Superscent', 'Scentuous' and 'High Fragrance'. 'High Fragrance' is, in my opinion, the best fragrant show flower developed to date. This peony form pale-pink bloom shades to deeper pink at the edge and has a lovely scent. It is a seedling cross between hybrid 'Salab' with 'Scentuous' as the pollen parent. The seed parent was *C. japonica* 'Mrs. Bertha A. Hams', an ivory-white large semi-double with wavy, crepe petals with a pink tone. The frontier in developing additional fragrant camellias is to broaden the horizon and use a wider range of fragrant camellia species, i.e. *C. forrestii*, *C. fraternal*, *C. kissi*, *C. meiyagaili*, *C. synoptica*, *C. tsaii*, and *C. yunnanensis*. My top recom-

mendation is *C. yuhsienensis* because it is fragrant and flowers in clusters—two potentialities in one! The very small white flower blooms profusely in midseason on an upright plant. It is the pollen parent of 'Yume'. The seed parent used by Dr. Kaoru Hageya was 'Shishi Gashira'. 'Yume' is a small single pink flower with genetic white blotches. Its abundant blooms make a showy display mid-to-late season

My second pick is *C. grijsii*, a very fragrant small white flower with potential to produce clusters. Hybridizing potential is excellent if the parental chromosome numbers

can be identified. Researchers report that *C. grijsii* is a diploid with sub varieties having different numbers of chromosomes, such as 30, 45, 75 and 90. Hybridizing results would be best if both parents have the same number of chromosomes. For example, *C. japonica*, a diploid with 30 chromosomes, should be hybridized with *C. grijsii* with 30 chromosomes. Conversely, less success would be anticipated if the sub variety carries 45, 75 or 90 chromosomes.

(Editor's note: Look for Part II in the next issue of The Camellia Review.)

CREATING A NEW CAMELLIA GARDEN

**Bradford King
Arcadia, California**

The last several years I have been planning to upgrade my front side lawn and garden. Twenty years ago when we moved into our home this 45 x12 foot area was covered by Zoysia grass, one large birch tree and three holly bushes. This "lawn" was neat, clean, low maintenance and evergreen except for the birch leaves in the fall. Lynn and I found the space plain and sterile and we soon planted a row of daylilies against the short cement wall that divided our lot from our neighbor. The daylilies softened the harshness of the cement and the profusion of June flowers made a lively and attractive display. Several years later we visited Nuccio's Nursery and bought a pink dogwood to plant in front of the daylilies. The dogwood and daylilies were some of our favorites when we lived in New England and brought a "touch of home" yet clearly "California" with the Zoysia grass all round them. I installed an irrigation system and planted a gardenia to cover the plumbing. Lynn planted perennials in half circles on either side of the driveway and various annuals for color. This fall we decided other changes were needed. The gardener removed the three holly bushes and I removed more Zoysia grass to provide a 24' x 6' space which was shaded by the birch tree. This still left six feet of Zoysia grass that extended the 45 feet not covered by other plants. This "new garden" has a northwest exposure and is shaded by a second birch tree located on the front lawn. Because late afternoon California summer sun can be very hot, we planted a Ginkgo Biloba between the dogwood and one of the birch trees. At our camellia society meeting in November, 2005, the panel discussed "shade strategies" and agreed that optimal shade for camellias—and people, too—is provided by full-grown trees like California live oaks.

Lynn and I were fortunate to have two mature European white birch already in place. The panel cautioned the group to avoid trees like olive, Chinese elm and liquidambar because of their invasive root systems and recommended several mid-sized trees that have been found to provide the dappled shade camellias like. Birch and Ginkgo were the panel's recommendation.. The white bark with black markings of the birch compensated for the fall leaf pick up. The Ginkgo Biloba was treasured for the unique fan-shaped leaves that turn butter yellow in the fall. The female Ginkgo has a profusion of foul-smelling fruit and should be avoided in favor of the male. In the Ficus family, the Indian Laurel Fig provides a pleasing free form but requires heavy yearly pruning.

Now comes the most enjoyable part. What camellias do you want to plant? To my camellia collection of 100 varieties I wanted to add some more non reticulata hybrids that look good in the landscape and have a chance to win in the camellia shows. 'Night Rider' was selected for its very dark red small bloom. 'Lucky Star' was chosen because I like the lovely rich pink medium semi double flower. I also selected 'Coral Delight' and 'Coral Delight Variegated' because they often win at the shows. These plants were heavily budded when purchased at Nuccio's Nursery and I can hardly wait to see their deep coral pink small to medium blooms this winter. Several new promising Saluensis hybrids have been showing well and 'Coral Bouquet' and 'Island Sunset' were added to the collection.. 'Coral Bouquet' is a coral pink single medium to large flower. 'Island Sunset' is a medium semi double rich coral pink that shades lighter at the center of the bloom. This flower is on the cover September-December 2003 Camellia Review. My next selection

was 'Joe Nuccio the only non-reticulata hybrid honored with the Nuccio name. This orchid pink formal double has the interesting characteristic of incurved petal tips. All of these non-reticulata hybrids were planted in a 24 foot-long space several feet in front of the small cement wall dividing the garden from our neighbor's yard. The resulting straight row and my obsession with camellias inspired several other selections. Over the years I had lost two excellent reticulatas when the gardener trampled them during the pruning of shade trees. Therefore 'Queen Bee' with its large pink flower and 'W. P. Gilley' which blooms as a large pink mottled white flower were planted in front of the hybrids to break up the linear look of the space. While they will receive more sun than the other camellias, the new ginko will provide the needed shade. Since I already had three japonicas that I had won in our Society's monthly raffles still in pots, I found places to plant them to continue the more eye pleasing look. 'White Bouquet', a medium to large semi double white flower with blush tones is a new Nuccio introduction. 'Elizabeth Weaver' is a coral pink large formal double bloomer and 'Grand Marshal Variegated' is a red and white

medium to large blooms as either a peony or anemone form.

In conclusion there are three principles to follow when creating a new camellia garden. First is to have a plan. This includes finding an appropriate location—ample space with dappled sunlight. Plan the number and types of camellias to be planted. Second is to prepare the garden. In my case this included removing three bushes and yards of grass. It is crucial to properly prepare the soil. When the old roots and rocks have been removed is the optimal time to amend the soil. Camellias need humus—coarse peat moss and oak leaf mold are two of the best choices. The soil also needs to be loose and well drained—pine bark nuggets and sand can be used in amounts that fit your conditions. How will water be provided? (I needed to improve and add to the existing automatic watering system. Third is to enjoy the project. I love the planning, thinking, and figuring out Where and How. I like the opportunity to get down and dirty while planting. Finally when I create a garden I have a vision of camellias growing, maturing and blooming. I envision waking up one cold February morning to see that special flower so beautiful it takes my breath away.

[Return to TOC](#)

IT'S AN ILL WIND THAT BLOWS NO MAN GOOD

Bradford King

During the night of January 23, 2006 there were very high winds and rain that pelted Arcadia, Pasadena and the surrounding areas. In the early morning after a blustery night of listening to the winds, I went to raise the garage door in order to get the morning paper. I was shocked to find that one of our two birch trees had fallen across our driveway. This event gave me an excellent excuse (similar to "the dog ate my homework") to call

into work and say that I was unable to make it to the office. The tree and stump were removed by a professional tree company later that afternoon. A few days later I discovered that the water system had been damaged. This was repaired in order to provide water to the new camellia garden described above.

So where is the "good fortune" in this tale? Well, this new unplanned space provided the opportunity to add

two more camellia plants and , of course! I chose 'Nicky Crisp' and 'Harlequin'.

'Nicky Crisp', one of the very best non-reticulata hybrids, is a beautiful light pink semi-double with golden stamens. It is a clear, clean and consistent bloomer with notched petals. It is about 4" in size and blooms early to late season. Its parents are *C. pitardii* with unknown japonica. 'Harlequin', a 2006 Nuccio's Nursery introduction, is medium to large,

veined strawberry pink with rose-red stripes that tone deeper at the center. It has an irregular narrow white border and is quite flashy. It blooms early to mid-season. Nuccio's Nursery reports that it is a chance seedling.

The loss of the birch tree has not impacted the new camellia garden this winter, but will the summer sun necessitate that I provide additional protection for the plants? Only time will define what the 'ill wind' blew!

SICK BAY Bradford King Arcadia, California

In June a friend of mine sold his home in Arcadia to move out of state. He gave me his six potted camellias. They all had some dead branches and light green, unhealthy foliage. They had been purchased in 2000 and 2001 as healthy plants from Nuccio's Nursery. None of the plants had ever been repotted, but had received cottonseed meal fertilizer each April.

One plant was so far gone it ended up in the green trash can! It was in a soggy potting mixture with only a few short roots. This illustrates the most common failure in keeping potted camellias—overwatering resulting in extensive root rot.

The 'Frank Houser' had light green brown spotted foliage. It was in a three-gallon pot in very soggy soil. I hope to be able to save this reticulata suffering from root rot. It is a favorite variety with its very large rabbit-eared rose red blooms. When well grown it is a vigorous and attractive plant. The first step was to remove all the dead branches. The second step was to remove it from the pot to examine the root structure. It retained only a few long roots.

The third was to remove as much of the old soil mix as possible without damaging the roots. The fourth step was to repot it in a loose rich potting mix of two parts of a commercial camellia mix, one part pine bark and one part oak leaf mold. I filled the bottom of the pot with medium fir bark to the top of the drainage holes before adding the potting mix. The 'Frank Houser' was put in "Sick Bay" under a tree and receives partial morning sun and adequate water. The final step was to drench it with Monterey Aliette one tablespoon for two gallons of water to treat *Phytophthora Cinnamomi* (root rot).

The 'Nuccio's Bella Rossa' had dry roots and a sparse leafy top. It had three dead branches but a number of

healthy branches too. The root ball had numerous healthy white roots. It was diagnosed as suffering from lack of moisture. Therefore, it was potted up to a five gallon pot in the potting mixture described earlier in this article.

The 'Betty Sheffield Blush' we had given to our friend as a house gift over five years ago. Since his mother's first name was Betty, and he was her only child, we had planned to buy 'Betty's Beauty'. However, when we were unable to purchase it in a three or five gallon size we opted to buy 'Betty Sheffield Blush'. Its nickname in the camellia nomenclature is "Wonder Child." This plant was in moderately good shape. It had good foliage, four seed pods and a good root ball. It had never been pruned and it looked like it! After pruning out all the dead, crossed branches and opening up the center it was potted up from a five to a seven gallon container. Nylon bags (half of a nylon stocking) were placed over each seed pod. It too was placed in 'sick bay'.

The 'Harold L. Paige' was also in decent shape in a three gallon pot of wet mix. It was pruned and repotted in its three gallon container following the same steps as outlined for 'Frank Houser'. Because it leaned to one side it was staked to help it grow upright.

The sixth plant was in soggy wet soil and had sparse light green foliage. When removed from the pot, root rot was easily observed. It was potted down, staked and treated in the manner discussed under 'Frank Houser'.

This plant had the original Nuccio tag but the name had worn off. My friend thought it was called 'Snow Flake'. When I checked the Nuccio catalogue and *Camellia Nomenclature* there was no listing for a *C. japonica* with this name. I asked my friend to describe the bloom. He said, "It's

white with the size and shape of 'Grand Marshal', but less compact." I reviewed the Nuccio catalogue and found a listing for a "large white, highly built loose peony form" flower called 'Snowman'. This name rang a bell with him! It seems most likely, if it survives, that 'Snowman' is a new addition to my collection. This story shows how wise it is to have nametags for all potted plants. It might also be handy to keep a notebook or listing of all camellias when you purchase plants to add to your collection. This can be compared to having 'back-up' for your computer for all you computer literate people!

This summer, during the time I was composing this article, I came across a quote by Benjamin Franklin that I like. While I have no illusion about being a genius, I hope it appeals to you too:

"Genius without education is like silver in the mind."

With that thought in mind, what have we learned reading this article?

1. Potted camellias need to be repotted or potted up every two to three years.
2. Camellias require a loose potting mixture high in humus that is slightly acid. Camellia roots need air. Fir bark, perlite or sand provide the necessary air space and assist in keeping the "soil" well drained. Humus and acidity are provided with oak leaf mold or peat moss. If you use peat moss, use a coarse peat mixture. Peat moss when wet gets soggy and, when it dries out, it is difficult to get it correctly moistened to the right level.
3. Water regularly as conditions require keeping a moist but not wet or soggy mixture.

4. Prune out dead, crossing and low branches as they add nothing to the stature of the plant. The finished plant is open and pleasing to look at.

5. Label your pots and plants and keep a back-up list.

One more thing I might add is to mention that my friend was highly successful in growing camellias as lush and beautiful landscaping plants.

In 2000 he extensively remodeled his 1950's California ranch house in Arcadia. This included removing all the shrubs and trees in the front yard.

We discussed using camellias and azaleas as landscaping for this northern exposure. We went together to Nuccio's Nursery. His aesthetic vision was to use only red and white flowers against dark green foliage and only in limited varieties in an informal three-tiered effect. He purchased a dozen 'Red Bird' azaleas for the lowest tier. 'Red Bird' has a large ruffled hose-in-hose flower. He chose five 'Nuccio's Gem' with its large formal double white bloom for the middle tier. Five 'Grand Marshal' plants were selected for the back row. The medium to large peony form dark red flowers are particularly striking. 'Grand Marschal' was a particularly easy choice for him as he was a big fan of the Rose Parade held in Pasadena each January! These camellias were all planted in the ground with liberal amounts of coarse peat mixed in to the soil. They were topped with a thick mulch of fir bark and were fed cottonseed meal. This landscaping is strikingly beautiful with its bright red and white blossoms. And later when the plants are no longer in bloom the lighter green azalea and dark lush green camellia leaves continue to provide an attractive landscape to the home.



I never did anything worth doing by accident,
nor did any of my inventions come by accident;
they came by work.

—Thomas Edison