



The Plumeria Society of America, Inc.

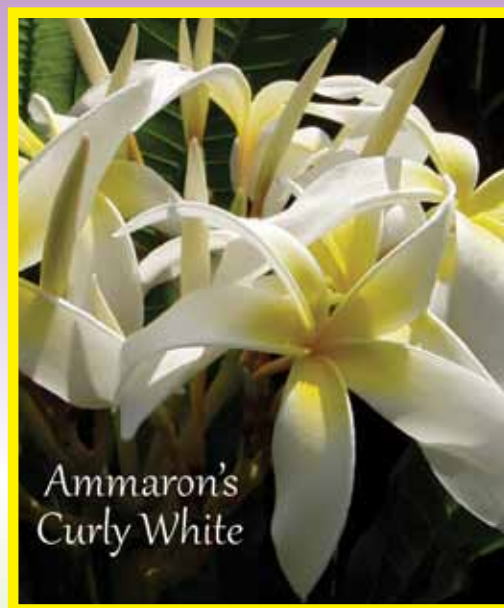
March 2012

Plumeria Potpourri

*The next meeting of The Plumeria Society of America will be held
Tuesday, March 13, 2012, 7:30 p.m.
at the Houston Garden Center in Hermann Park
1500 Hermann Drive, Houston, Texas.
Anyone with an interest in plumerias is invited to attend.*

Our speaker for the March 13, 2012 meeting is Rick Stone. Rick is a former PSA President and a long-time grower of quality trees. His program will be on micro (drip) irrigation for plumerias as well as other plants in the garden. Join us and find out all about keeping your plants efficiently watered during our long (and lately dry) summer months.

The lovely Ammaron's Curly White plumeria is registered with the PSA and named for Rick's son.



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President's Corner

by Mark Wright, Texas
email: wright5447@sbcglobal.net

"Drum roll please." The long-awaited digital format for plumeria registration is here.

Thanks to the hard work of Tex Norwood and Eulas Stafford, the backlog of registrations is gone. Going into the future, the process will be much faster and more efficient. The criteria for registering a new variety will remain the same, and all the information you will need is on the website (www.theplumeriasociety.org).

Speaking of the website, we will be working on it over the next few months. Our hope is to update the information and pictures, and make navigating the site easier.

The election results shouldn't come as a surprise. Unopposed contests don't often end in defeat. Our new Vice President, Jerry Hurlbert, is new to the Board, and we'll be losing some of our former members. Many of you already know Jerry as a member who never hesitates to help out wherever needed. He will bring us even more experience to add to that of all the fine people we now have. See page 11 for the complete list of Board positions and contact information.

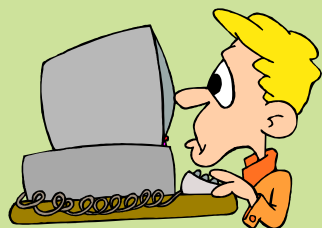
You may have noticed that the last issue of the newsletter had a list of plumeria societies as reference information. I did not know of a second group in Australia, but it has been

brought to my attention. The Australasian Plumeria Society (www.austplumeriasoc.herobo.com) is a fairly new group which I did not intend to slight by not including them in the reference list. My only excuse is that I don't have as much extra time as I'd like to research things. Several of my retired friends tell me they had much more time when they were working. I know an hour is 60 minutes—this doesn't change. Perhaps tasks take longer as we age. My excuse is trying to remember what I was doing or where I left my (fill in the blank).

Our second plant sale of the year is moving back to the location of the Fort Bend County Fairgrounds in Rosenberg, Texas, and will be held July 14, 2012. This is a great location with lots of parking available. We hope to see all of you this summer at both of our show and sale locations.

With the emphasis on water conservation in dry times, our program for the March meeting should be a "must attend" event. Former PSA President Rick Stone will explain micro (drip) irrigation with the emphasis on plumerias. With that said, I realize this could be a great way to get some of that lost time back I mentioned earlier. I'll be taking detailed notes.

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*YOUR LABEL HAS YOUR
MEMBERSHIP EXPIRATION DATE!*

The Plumeria Society of America, Inc.
P.O. Box 22791
Houston, TX 77227-2791, USA
Dues are \$25 per year

Re-Relocated Bud's Sally

Several years ago as our favorite Florida Keys RV park "Gulfstream" was being sold and destined for destruction, clearing the way for expensive condominiums, a lady called asking me to move a plumeria I had given her earlier. She was very afraid bulldozers were going to level everything, which of course happened shortly thereafter.

Coincidentally, another person was searching for a nice plant for her very lovely home across town, so Nancy and I did some digging and tied the shrub on top of our little Suzuki. As luck would have it, I had forgotten my camera, and I badly wanted a shot of this thing piled upon our car, which held many memories going all the way back to Huntington Beach, California. Fortunately, someone produced a Polaroid camera and saved the day. The years passed with



Father Time
and Mother

Nature both being very kind to this beautiful tree. Nancy and I were amazed when we saw the California Sally tree this year.

This winter was the best in years for plumeria spotting. Many were hanging onto their leaves and blooming like crazy for most of our trip including our re-relocated *California Sally* aka *Bud's Sally*.



California Sally in her new home in the Florida Keys



California Sally blooming in California



California Sally—winter blooms in the Florida Keys

A Full-Proof Method to Root Plumerias

by George Hadjigeorge, Texas

Rooting plumeria cuttings can be difficult at times. This is especially true for green cuttings, which do not contain any grey wood. Plumeria cuttings are susceptible to rotting especially if kept too wet or if they have not been dried adequately. It is really frustrating to follow instructions for rooting plumerias and still loose some of your valuable cuttings to rotting.

In order to understand how we can improve the rooting process, we must first understand how plumerias grow and how cuttings develop roots. The following picture shows a cross-section of plumeria branches of various ages.



There are four distinct parts: a) the center, soft white core, b) the woody part that gives the branch strength, c) the bark, and d) the skin—thin plastic film-like material. The center, soft white core and the woody part change the most as the branches age. The bark and skin do change some but not that much. As the branch ages, the center, soft white part becomes smaller and the woody part becomes much larger.

The left cutting in the picture above is a green branch of only a few months old. The woody part is very small and the soft white center covers most of the cross-section. This branch is rubbery and very flexible. The center cutting is about a year old, and the cut is made in the grey wood of the branch. The center, soft white core is much smaller than the younger, green branch on the left. The woody part of the center cutting is about 1/8" thick versus about 1/64" for the green branch. The cutting in the center is the cutting that is most appropriate to root. The branch on the right

in the picture is about four years old. The center, soft white core is very small and the woody part is very thick (about 3/8"). This type of cutting is more difficult to root and supporting it during the rooting process is difficult. As a branch ages, the woody part grows and the branch becomes stiffer. Plumeria branches grow similarly to fig tree branches. Both have similar structure and similar white, sap-like milk.

The following pictures show the side and bottom views of a rooted cutting eight weeks after planting. The bulk of the roots emanate from the cut bark around the perimeter. There are very few small roots in the center of the cut. In addition, there are no roots coming from the side of the bark. Note how the bottom has flared out becoming much larger in diameter than the original diameter of the cutting. It appears that most roots initially are formed by sap flow from the cutting via the cambium (area between the bark and woody part).



The next picture shows a one-year old rooted plumeria cutting.



There are a lot more roots after one year than in the previous pictures after eight weeks. Still, after a year all roots emanate from the bottom cut and none from the side (bark).

The picture on the right shows a three-year-old plumeria with stronger roots coming from the bottom and covering the entire bottom cross-section. There are roots coming from the side of the bark limited to within about an inch above the original cut.



It appears that later, as the plumeria ages, the bottom heals completely and more roots develop from where the soft white core was located. In addition, roots develop from the side of the bark within about an inch above the original cut. The pictures below show two views of the same rooted cutting (one at 180 degrees to the other one) after five months. The first picture below shows several new roots beginning to emerge from the side of



the bark while the next picture below shows a large root coming out of the side of the bark (about ¼"



above the original cut) and several new ones just beginning to emerge from the side of the bark.

The main problem in rooting plumeria cuttings is rotting, which mostly starts at the center, soft white core. This is why plumeria cuttings must be allowed to dry for two to three weeks before planting, and the planting medium must not be kept too wet. During the drying process, the cut heals and minimizes the chances of rotting. However, immature green cuttings contain a relatively large, soft white core and are more prone to rotting and as a result are difficult to root. Also, short cuttings undergo severe damage due to loss of moisture, which is a much larger percentage of the total sap content of the cutting, which limits the chances of success. This is why it is difficult to root green cuttings and short cuttings with the standard rooting method.

Being of Mediterranean background, I have quite a collection of fig trees in my yard. People are always asking me for some fig plants. A trick I use to root fig trees, which grow similarly to plumerias, is to allow the cuttings to form calluses over the winter. To do this, I take cuttings early December and plant them upside down in moist mulch. I place about two to three inches of mulch over the cuttings, and set them aside in the garage. By springtime, the cuttings have healed and callus has formed and covers the cut completely. The fig cuttings are then planted in soil, and they root very quickly with 100% success rate. The process of developing a callus over the cut aids in preventing the cuttings from rotting and in speeding up root development. Since plumerias and figs grow similarly, this method can be adapted to root plumerias.

It is not practical, nor it is necessary to bury plumeria cuttings in mulch. Instead, plumeria cuttings can be planted in moist mulch like they are planted in soil. Since the process is to form calluses in the cut side of the cuttings and not



to develop roots, many cuttings can be bundled together (picture above).

Alternatively, plumeria cuttings can be placed in a plastic tub (like a concrete mixing tub) and the cut ends can be covered in mulch (picture below).



First the cuttings must be dipped in rooting hormone when they are cut off the branch. This stops the bleeding of sap from the cutting. Then the cuttings must be air dried overnight (minimum of three hours) before planting in mulch. The mulch must be moist but not wet. If you're not sure, mix one part wet mulch with four parts completely dried mulch to get the right moisture level. If not certain, it is best to use drier mulch than moister mulch. The idea is to keep the cutting from drying and keep 100% humidity around the cut to encourage healing as a precursor to root development.

Mulch in flower beds keeps the soil from drying up quickly in the heat by condensing the water vapor that evaporates from the soil and returning

it back to the soil by capillary action. Similarly in this process with plumeria, the mulch maintains 100% humidity around the bottom cut of the cuttings while the cuttings are not wet at all. The cuttings must be kept dry in a shaded area and not watered. It is important to keep the cuttings on the dry side or they will rot. Inspect the cuttings after about seven days. If the mulch was too wet, a few cuttings may begin to rot. If that happens, cut the rotting part off, dip in rooting hormone, dry overnight (minimum three hours), and plant again in the mulch. Also, make sure if you use pots to do this that they are not in contact with a wet floor, because the mulch will soak up the water by capillary action and become wet. Place the pots on something to keep them off the floor.

In just one week the healing process is well underway as can be seen in the picture on the right. The soft white center is not flat any more (It was flat originally as it was cut by a fine saw.) but shows irregular shape as it has begun to expand and grow. The woody part is no longer visible, and it is completely covered by growth



(yellowish ring). Note that the yellowish ring forms by sap flow from the cutting via the cambium (area between the bark and woody part). That is why the yellowish ring grows over the woody part and nowhere else. As I have shown in a previous section, when the cutting is rooted, most roots will develop in this yellowish ring. The white powder is rooting hormone.

After three weeks the cuttings are completely callused, and the callus covers the whole soft white



and woody parts of cut. Note that the bark does not appear to callus or grow out. The callus also grows and bulges out about 3/16", and

it contains a lot of bumps and valleys. In addition, the bottoms of most cuttings flare out, ready to develop roots. As a result of the callus covering the whole soft white center, the chance of rotting upon planting is very low.



I use this method to root all my cuttings and have never lost a cutting to rotting. In addition, it works well any time of the year. I successfully rooted a green cutting taken at Thanksgiving. As a matter of fact, the method works even better when the plumeria is growing rather than being dormant (cuttings callus better and more quickly). The pictures below show cuttings healed in mulch in



July 2011. Average temperature was 97 to 100 degrees F, so some of the cuttings shrivelled a little. Notice how the cuttings expand and flare out in the bottom from the growing callus (second picture below).

If left in mulch longer than three weeks, the cuttings begin to develop roots. As can be seen from the pictures in the following column, after four weeks, roots start to emanate from the bottom of healed cuttings. Root development happens

both around the bark (bottom cut), the healed part over the woody part, and the healed center white core. The pictures show clearly that healing the cuttings in mulch aids immensely in root development. Clearly, the cuttings start developing roots



after about four weeks in mulch. As a result, when cuttings healed in mulch for three weeks are planted in soil, they begin to develop roots

in just about one week. After three weeks, it is best to plant cuttings healed in mulch rather than letting them develop roots in mulch because those roots are very fragile and difficult to handle.

Green cuttings can be readily rooted with this method with 100% success rate. The next pictures show rooted green cuttings (less than a few months old) in mid October. The picture on the top right shows a healed green cutting, shown rooted in the bottom right picture, after healing it for two weeks in mulch. The cutting's appearance is very good with no shriveling,



moisture loss, or damage. A ring of callus over the woody part is visible. The large, soft center white core, characteristically large for green cuttings, seems to have healed very well with no damage. Green cuttings callused like this will not rot when planted in soil. Green cuttings are a bit slower to develop roots than grey cuttings. The last picture on the previous page shows rooted green cuttings with a full set of leaves about six weeks after planting.

Even very short cuttings like the 4" cutting in the picture below callus very well. And short cuttings



can be readily rooted with this method as the picture above shows. These rooted cuttings are less than 4" long. Even very thin cuttings (second from the right) of about 1/2" diameter can be readily rooted. The problem in rooting very short cuttings is that they do not contain much sap (due to the short length) and can easily shrivel by losing moisture, which affects their viability. This method overcomes this problem, and short cuttings can be rooted with 100% success rate.

A study was done to compare this method to the standard method with respect to root development. The picture at the top of the next column shows the air-dried cuttings on the left and the healed-in-mulch cuttings on the right after three weeks. The difference in the two sets is dramatic. The cuttings dried in air show significant damage in the center white core and the woody part. The bark does not show much damage but the center, soft white core appears to be separating and pulling away from the wood. On the contrary, the cuttings healed in



mulch show no damage. After three weeks they all have healed very well. A callus developed between the bark and the soft white center and completely covered the woody part. On most cuttings, the callus covers the soft white center completely and grows out. The amount of callus that develops seems to depend on variety.

The two sets of cuttings, dried in air and healed in mulch, were planted in a 50:50 mix of potting soil and perlite. They were watered well and placed in a sunny location around the pool to root. The set that was healed in mulch began developing leaves after about one week. The set that was air dried began developing leaves after about three weeks. This difference is surprisingly relatively small, considering how the two sets of cuttings appeared before planting them.

Eight weeks after planting, the rooted cuttings were gently uprooted to prevent root damage. I used a gentle water jet in order to expose the root system by washing the soil and perlite away. The following pictures show a comparison of the



roots—the picture above of the cuttings dried in air and the next picture for the cuttings healed

in mulch. There really does not appear to be a significant difference between them.



It is remarkable that for both the cuttings dried in air and healed in mulch, besides some small differences, the roots are very similar in the two sets of cuttings (same amount of roots and coming out at the same location). There really isn't a significant difference. In addition, both sets of cuttings have a similar amount of leaves. Thus, healing plumeria cuttings in mulch does not result in a more vigorous root system than rooting the cuttings with the standard method. As shown in many pictures in this article, the reason for this is that when plumerias first root, most roots emanate from the cut bark around the perimeter of the cut, where the bark remains very similar in both methods. As the picture of the cuttings shows, the main difference in the two methods is in the center white core and the woody part, but the bark is similar. There was no damage between the woody part and the bark in any of the cuttings.

Since most plumeria cuttings healed for three weeks in mulch develop excessive amount of callus over the cut that may cover some of the bark, it is

probably better to heal them for only two weeks in mulch. In two weeks in mulch the cuttings, including green cuttings, healed enough so they are not very likely to rot.

Using the standard method, it is recommended to root plumerias in the spring to early summer. Based on this work, it is clear that air drying plumeria cuttings in the middle of the summer heat will lead to a lot of moisture loss and shriveling of the cuttings, reducing their viability.

Using this method of healing the cuttings in mulch not only works better in the hot summer months (cuttings callus better and quicker), but this method could also be used any time of the year. Some cutting shriveling does occur in the summer months, but is not really that bad, and it does not affect cutting viability at all. In addition, this method works equally well for both green and mature cuttings as well as very short cuttings, whereas the standard method does not do very well with green or short cuttings. In addition, with this method the success rate is about 100%, whereas with the standard method some cuttings fail to root and rot.

Broken branches from moving plumerias to winter storage can be planted in mulch and stored in a dry place in the garage till the spring. By spring time the cuttings would either heal well or develop roots, depending on conditions, and can be then planted in soil/perlite-filled pots.

The method of healing plumeria cuttings in mulch is really a full-proof method for rooting any type of plumeria cuttings any time of the year.

The 2012 plant sales will be upon us before we know it. Our first plant sale of the year is June 9th in Seabrook, Texas, followed by the sale at the Fort Bend County Fairgrounds on July 14th. Please note the key dates summarized below. The growers' meetings will be held after the general meetings in order to allow time for people to arrive. Below is a timeline of important dates for our 2012 sales. Please contact me (German Collazos) with any questions at (713) 670-4064 or german.collazos@tic.toshiba.com.

Seabrook (Clear Lake) Sale—June 9		Fort Bend County Fairgrounds Sale—July 14	
April 24	Commitment to sell on June 9	June 26	Commitment to sell on July 14
May 8	Sellers' meeting (after general meeting)	July 4	List of plumerias to be sold on July 14
May 30	List of plumerias to be sold at June 9th sale	July 10	Sellers' meeting (after general meeting)
June 9	Sale in Seabrook	July 14	Sale at Ft. Bend County Fairgrounds



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The Plumeria Society of America Website

Additional information concerning The Plumeria Society of America and culture of plumeria plants may be found on the World Wide Web at the following address:

<http://www.ThePlumeriaSociety.org>

A listing of currently registered cultivars — Research Committee Bulletins — PSA By-Laws
Plumeria Care Bulletins — Photos from past events — Map links to meeting and sale sites
Photos of plumeria plants and flowers — past color insert pages in PDF format

Purpose of The Plumeria Society of America

- (1) Promote interest in and increase knowledge of plumeria hybridization, propagation and culture of plumerias.
- (2) Share this knowledge with hobbyists interested in plumerias.
- (3) Provide a register for recording, identifying and classifying by name new types and varieties of plumerias.
- (4) Encourage and unite plumeria enthusiasts around the globe, throughout America and across the seas.

The Plumeria Society of America, Inc.

P.O. Box 22791

Houston, TX 77227-2791, USA

Dues are \$25 per year

*Copy this page for all your friends who love plumeria
or just want to know more about them.*

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PSA Calendar — 2012

January 10meeting

March 13meeting

May 8meeting

June 9 Show & Sale I (Seabrook/Clear Lake)

July 10meeting

July 14 .. Show & Sale II (Fort Bend County Fairgrounds)

October 9meeting

open Fall Social

- All regular meetings are held at the Houston Garden Center in Hermann Park, 1500 Hermann Drive, Houston, TX. Meetings begin at 7:30 p.m., workshops begin at 6:45 p.m.
- Bring your blooms. Bring your friends.
- Bring plants, cuttings, etc. for door prizes!! These can be anything, not just plumerias.
- Visitors are invited and encouraged to attend.

Pink San Germain

by Steven Prowse, Australia
Sacred Garden Frangipanis

Pink San Germain is almost identical to San Germain in every way except this amazing new hybrid has pure dark pink/hot pink flowers. It has the same incredible perfume. I regard this as the plumeria world's greatest breakthrough in breeding color into evergreen plumerias. A red-flowered San Germain is now possible due to this incredible development. Being a San Germain hybrid with its plumeria caracasana parentage, it is completely rust free. Bred by Dr. Kukiart Tanteeratarom.



Mango Blush



Wildfire



Banana Berry



photo from Antonio Butera