THE PLUMERIA SOCIETY OF AMERICA, INC. PRESENTS ...

PLUMERIA POTPOURRI

Vol. 18 / No. 2

MARCH 2001



Plunging Plumeria in the Ground 'Tillie Hughes' Plumeria Of The Month



Newsletter Devoted To World's #1 Flowering Tree

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Notes From Fred Yoder...

The PSA is looking for members to do some Plumeria Photography & needs Members to Volunteer they Plants to be photographed.

Also the PSA is always looking for Plumeria names and Plumeria web sites for our records.

Send Correspondence to: Fred Yoder P.O. Box 22791 Houston, TX 77227

July 10th PSA Meeting Guest Speaker

Dr. Robert McMillan of the University of Florida

He will be discussing Rust. A stubborn and hard to control Disease that affects Plumerias. Your attendance would be greatly appreciated.

Meetings are held at the Hermann Park Garden Center 1500 Hermann Park Drive (next to the museum) Houston, Texas

Cover photo Courtesy of K. W. Bridges

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The Mighty Trunk

Its spring time. Time to think about getting the plants out. As for the PSA, we are still working on improving the newsletter, membership, working on name registration and trying to start a field guide. Hopefully we will have more information on that in the next issue.

I have noticed that some people think Plumerias like to be root bound. Quite the opposite, and for those of us growing plants in pots, the root structure is the key to the difference between a good plant and a great plant. Actually, the key is the trunk, but, in the early life of a Plumeria, as the roots go, so goes the trunk.

A small trunk cannot support a big tree crown (which is what we want), no matter how good the root structure. Everything from the roots must go through the trunk to get to the crown. If, in the early life of the plant, the root structure is restricted, the trunk will grow up more than out so, the crown will not be compact because the trunk will not be able to support additional tips. The result is long branches between flowering. It will take additional years and a trim or two to get the trunk up to speed. So, what to do?

Always start your plant in the biggest pot possible, the bigger the better. I have said this before and I say it again. Then, let the tree grow as big as possible before trimming it. If it started from a cutting, that might be 5 or 7 years before the first cut. If it won't fit in the garage no matter what, then you can trim it.

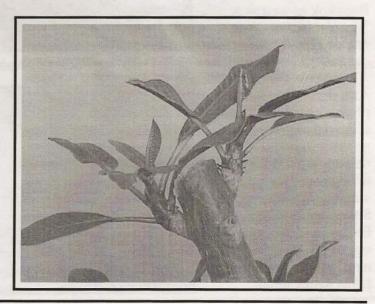
When you do finally trim it. Cut it way back, the strong trunk and roots with produce many tips where before there was just one or two. Finally you will have a compact lower to the ground Plumeria. Just what you wanted if you are growing in pots. I consider the trunk as kind of a storage and

...let the tree grow as big as possible before trimming it

support structure. For a potted Plumeria it is crucial that it be thick. The ability of the plant to maintain foliage and growth on hot stressful days is dependent on the trunk. A trunk that would be adequate in June or July when there are fewer leaves and cooler days, may not be able to support a fully leafed out crown on a very hot day in August. So, the tree will drop leaves so it can maintain the rest of the crown. Also, it will produce less tips and they will be further apart. That translates to less flowers.

In summary, grow for the trunk, the rest will follow. Have a good summer.

Rick Stone President

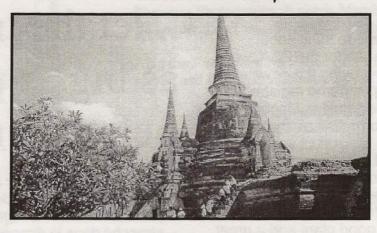


Ancient Trees of Thailand

I went on holiday to Thailand in December, 2000. This was my fourth visit but is was quite different from the three that preceded it in the past 3 years. On this trip I had more of an awareness of and appreciation for the plumeria trees which one sees almost everywhere. Thailand lies 14 degrees north of the equator and enjoys year round hot and humid weather, ideal conditions which encourage prolific growth of plumerias.

The plumeria is referred to as the temple tree in Thailand as they are found on the grounds of the splendid and sprawling Buddhist temples throughout the country. I saw them at the Grand Palace in Bangkok as well as at Wat Yai in Auyutthaya, one of Thailand's ancient capitals.

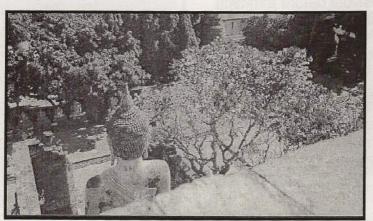
As a decorative tree, plumerias can be found scattered about the grounds of hotels and resorts. What a joy it was to be able to look out my window from the Sukhothai Hotel in Bangkok and feast my eyes on huge and well tended to plumeria trees. I was struck at the



"The plumeria is referred to as the temple tree in Thailand as they are found on the grounds of the splendid and sprawling Buddhist temples throughout the country."



Photos by Robert Green



variations in degree of fragrance. Some blooms had that strong intoxicating aroma we all love, others were less fragrant.

Most trees I saw bore white or yellow blooms. There were just a few I saw in Phuket with pink blooms. I ventured as far south as PhiPhi Island which is primarily a resort destination island. Old growth plumerias were strategically planted lining pathways at some resorts.

Here in the non-tropical inhospitable climate of Northern California, we spend a great deal of time and effort getting our little cuttings to produce foliage and if we are lucky, a cluster of blooms here and there. Contrast that with Thailand's freely growing large plumerias which exist with very little effort or regard from the average passerby. Thailand is truely A plumeria paradise!

Robert Green www.plumeriajournal.com



Fung-Away® - Our Friend

One of the big pluses in Plumeria is their relative immunity to insects pest and plant diseases. In Houston, our main problems are Black Tip fungus and Leaf Rust. Quite by accident, while winterizing our Plumeria in the fall of 1993, we fed the plants moderate doses of a granular systemic fungicide GreenLight Fung-Away®. At the time we thought we were feeding the plants with Diazinon to combat cutworms. Fortunately the plants showed no signs of damage from this inadvertent treatment.

The following Spring we decided to feed some of our plants sparingly with Fung-Away® as treatment for Black Tip fungus. We had moderate success with this treatment, although certain plants prone to Black Tip, such as 'Lurline' continued to black tip. That Summer many Plumerias in our area experienced a severe problem with leaf rust [a reddish orange airborne spore that shows up on the bottom of the leaves]. To our surprise, the Plumeria that had been treated with fungicide were rust free. This made believers of us. Since then we have used it consistently with great success.

We continued to experience black tip with 'Lurline', which is one of the most beautiful Plumeria flowers. In the Spring of 1996, Jim had his fill of black tip problems with the plant. It had never bloomed due to the black tip since we had acquired it in 1989. He decided he could cure it or kill it. The plant was in a 5 gallon container and it was fed 6 to 8 heaping teaspoons of Fung-Away® every 2 weeks for a 2 month period. We were surprised the plant did not die, but for the first time in 7 years had two healthy inflorescences with beautiful blooms. The only indication of an overkill was a crinkling of the otherwise healthy green leaves. We are still experimenting to achieve the ideal dose

to avoid this problem. As a matter of course, we periodically feed all our Plumerias the Fung-Away® granules, with extra doses for the plants that seem prone to Black Tip fungus. This has greatly reduced our problems with both Black Tip fungus and Leaf Rust. Typical treatment doses are 1 teaspoon for 1 gallon pots, 2 tablespoons for a 3 gallon pots and 3 to 4 tablespoons for 5 gallon pots.

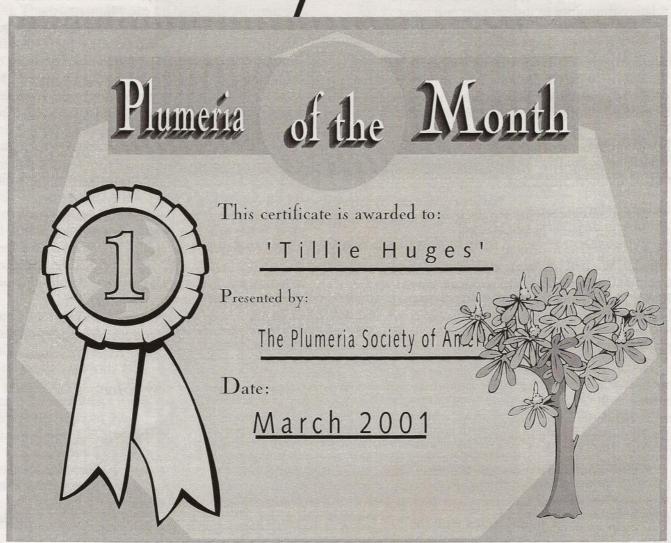
This article is not meant to be a commercial for the GreenLight Fung-Away® granules. Although this is the particular brand that we used. other granular fungicide products would likely work as well.

In summery, the granular form of Fung-Away® does not appear toxic to Plumeria in heavy applications, and the systemic nature of the product seems very effective in preventing Leaf Rust and Black Tip fungus.

by Eilene & Jim Hill



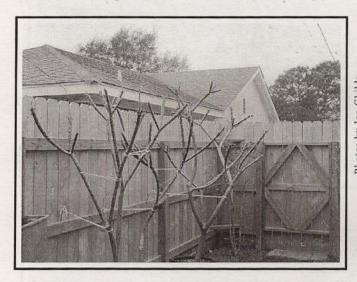
Plumeria of the Month



This month, we have selected for "Plumeria of the Month" the Plumeria c.v. "Tillie Hughes" and is the 16th one in the series. Previously presented Plumeria cultivars are "Pandora", "Guillot's Sunset", "Dwarf Singapore Pink", "Jeannie Moragne", "Kimo", "Aztec Gold, "Grove Farm", "Puu Kahea", "Donald Angus", "Singapore", "Celadine", "Japanese Lantern", "Keiki", "King Kalakaua", "Dean Conklin" and "Loretta". All of these past issues are available in Adobe PDF format on the web site at http://www.ruf.rice.edu/~miltonp/plumeria/ColorInserts.html. These documents can be viewed with the free software "Acrobat Reader" from Adobe. A link to the Acrobat download site is provided as well.

I would like to thank those of you who have generously provided photographs of named Plumeria cultivars contributing to this color insert page. Next month (May 2001) we will do "Courtade Pink" using more of the generously donated photos. I am always in need of more photographs of named Plumeria cultivars for future color insert pages. The older varieties have been scheduled for presentation first, then later the more recently named varieties will be showcased. Please help if you can. Credit will be given in the publication for your pictures and the originals will be returned to you if you need them. With your help, we will be able to continue this color page well into the future.

Spring Inspection and Care for Plumeria



Photos by Joe Childs

In the northern hemisphere, spring season brings longer days and warmer weather. This is the time to begin thinking about bringing plumeria plants out of winter storage. The average last frost date for Houston (zone 9) is February 5, meaning that plumeria should be protected for at least a month after. When the night temperature is staying above 40°F plumeria can be moved out of their winter storage to your favorite spot in the yard. Remember, plumeria are severely damaged, if not killed, by subfreezing temperatures.

When bringing plants out, inspect them for damage such as black tip rot or stem rot. Limbs that appear to be rotten should be cut back to clean white wood. This can be accomplished by using any sharp sterilized instrument. Re-sterilize the cutters between cuts with a weak solution of bleach and water to avoid spreading disease to the new cuts. Note; some shrivelling of the limbs occurs with all varieties, in some cases it is quite prominent. Usually they will recover nicely when planted and watered.

Spring is a good time to transplant overgrown plants to larger containers or to root prune and top dress while the plumeria are still dormant. If the plant is in the largest container that is manageable, consider root pruning and top dressing with fresh fertile well draining soil mix for vigorous plant growth. To root prune simply remove the rootball from it's container and cut 2 to 3 inches away from the sides and bottom. rake the same amount of soil from the top side as well being careful not to damage the tree trunk. Now add fresh soil to the container to a depth equivalent to the soil removed from the root ball bottom. Place the plant in on this new soil and fill in around the sides and top to the original soil depth and firm well. Water the newly replanted plumeria well while holding it upright until the soil has settled and water drained.

Plumeria are heavy feeders and appear to do well in fertile well draining soil. A good soil mix is one that allows water to soak the rootball quickly, while retaining plenty of moisture, it allows excess water to drain within a few minutes. The good soil mix should

contain plenty of nutrients to encourage growth and blossoms on plumeria also. One soil mix that works well is as follows:

1 part 1/4 inch bark mulch (Professional planting mix)

1 part good potting soil

1 part calcined clay (Commonly sold as oil dry)

1 part sheep manure 1 part sharp sand

1/6 part bone meal or superphosphate

Other additives can be used to round out this mix such as 1 part perlite and 1 part peat moss plus osmicote with equal N-P-K numbers. The soil mixture should also be heavy enough to help keep plants upright in a moderate breeze.

When placing your plants outside, try to space them out to maintain good air circulation which will discourage pests and disease. It is sometimes difficult to remember how much space is needed by a plant in full foliage when looking at a bare-branched plant. Proper spacing will also allow you to get close enough to enjoy the beauty and fragrance of your many flowers.

Milton Pierson

Plunging Plumerias Sinking pots in the ground, can you dig it?

Plunging Plumerias is to bury the Plumeria's pot in which a plant is growing up to its rim in the soil outdoors. Many tender Plants, such as Plumerias, are plunged outdoors in the summer, and do far better than if the pot were standing on the surface. A few of advantages of plunging Plumerias are drought resistance, plant stability, and aesthetic value.

Often times Plumerias that are kept in pots above ground can stay in a constant state of wilt. Some Plumerias just can't seem to get enough water during the summer heat. Plumerias that stay in a state of wilt will become stressed and under perform. Burying potted Plumerias in the ground will help protect against this watering stress cycle. Plunged Pumerias are more drought resistance for a number of reasons. When potted plants are buried in the ground they don't dry out as much as potted Plumerias that are exposed. Plumerias benefit from the constant below ground soil temperature, which protects the roots & potted soil from the high summer temperatures. Vigorous Plumerias will jet feeder roots out the pots drain holes. These feeder roots acquire water and nutrients that aid in drought tolerance. So, to help combat Summer's drying heat plunge Plumerias.

Potted Plumerias can blow over in moderate winds, and most unsecured Plumeria will blow over in strong winds. Plunging the pot in the ground will give you unmatched stability and wind tolerance. So, to stand up to thunderstorm's strong down drafting winds plunge Plumerias.

Plunging the pots in the ground hides the common black plastic pot, and provides a clean and natural look to the landscape. Plumerias can be plunged in flower beds, where they can be watered by sprinkler systems and then mulched around to complete the look.

Plunging Plumeria is already very popular in Texas, because it has proven to provide great benefits to Pumerias. Plunging increases drought tolerance, wind resistance, and improves the overall look of the landscape.



4/14/2001 I tilled 3 rows and raked out all loose grass.



4/14/2001 I spaced them apart as needed.

PLUMERIA POTPOURRI



4/21/2001 I repotted the plumeria in larger pots.

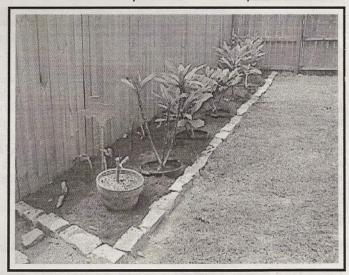


4/21/2001

I buried the pots to desired depth.



4/22/2001 I laid a stone border.



4/22/2001 I applied 4 inches of hardwood mulch.



6/29/2001 Looking good & growing great.



6/29/2001 Bloom stalks are every where.

Plumeria Terminology

Many times we are reading about plumeria or listening to a talk about research and find ourselves in the midst of technical terminology. This Care Bulletin is meant to serve as a glossary of terms that appear from time to time in discussions of plumeria. It covers the main plant parts including growing tips, flower parts, fruit (seed) and leaf parts. All definitions appearing here refer to use of the word in the botanical sense only, primarily in reference to woody plants such as plumeria.

Acuminate. Pointed. Tapering concavely to a slender or acute point.

Apical bud. A bud at the tip of a stem.

Apical dominance. The inhibition of axillary bud growth by the apical bud.

Apical meristem. A region of actively dividing cells at the tip of a growing stem or root.

Axil. The angle between the upper surface of a leaf and the stem to which it is attached.

Axillary bud. A bud located in an axil at the base of a leaf.

Callus. A corky tissue developed by woody species to cover wounds.

<u>Cambium.</u> A lateral meristem in most vascular plants that forms parallel rows of cells resulting in secondary tissues either as secondary growth or as cork.

<u>Chlorophyll.</u> Any of a group of related green pigments found in photosynthetic organisms, especially: 1. A waxy blue-black microcrystalline green-plant pigment, C55H72MgN4O5, with a characteristic blue-green alcohol solution. Also called chlorophyll a. 2. A similar green-plant pigment, C55H70MgN4O6, having a brilliant green alcohol solution. Also called chlorophyll b. These in plumeria leaves make them look green.

Cork. The protective outer tissue of the bark.

Corolla. All the petals of a flower considered as a group or unit.

<u>Cotyledon.</u> Botany. A leaf of the embryo of a seed plant, which, upon germination either remains in the seed or emerges, enlarges, and becomes green. Also called seed leaf; a food storage structure in seeds.

Cultivar. A cultivated variety, produced by horticultural techniques.

Cytokinin. A plant hormone primarily stimulating cell division.

<u>Flower.</u> n 1. The reproductive structure of some seed-bearing plants, characteristically having either specialized male or female organs or both male and female organs, such as stamens and a pistil, enclosed in an outer envelope of petals and sepals. 2. Such a structure having showy or colorful parts; a blossom. v. To produce a flower or flowers; blossom.

Flowering plant. A plant that produces flowers and fruit; an angiosperm.

Fragrance. 1. The state or quality of having a pleasant odor. 2. A sweet or pleasant odor; a scent.

Glabrous. Having a surface without hairs, projections or pubescence; smooth.

Graft. The union of a piece of one plant to another established plant.

Inflorescence. 1. A characteristic arrangement of flowers and buds on a stem. 2. A flower cluster.

Leaf scar. A scar left on a stem after a leaf has fallen.

<u>Leaf.</u> A usually green, flattened, lateral structure attached to a stem and functioning as a principal organ of photosynthesis and transpiration in most plants.

Limb. One of the larger branches of a tree.

Meristem. A region where cells actively divide.

N-P-K ratio. The relative proportions of nitrogen, phosphorus and potassium in a fertilizer.

Obtuse. a. Not sharp, pointed, or acute in form; blunt. b. Having a blunt or rounded tip.

Ovary. The ovule-bearing lower part of a pistil that ripens into a fruit.

Panicle. A highly branched inflorescence (branched cluster of flowers in which the branches are racemes).

Petal. A unit of a corolla, usually showy and colored.

Petiole. A leaf stalk.

Pistil. The female, ovule-bearing organ of a flower, including the stigma, style, and ovary.

<u>Pollen.</u> The fine, powder like material consisting of pollen grains that is produced by the anthers of seed plants. A structure that develops from a microspore in Angiosperms to become a male gametophyte.

Pollination. To transfer pollen from an anther to the stigma of a flower.

Pubescent. Having short hairs or soft down.

Raceme. An inflorescence in which flowers are borne on short stalks on an elongated stem.

Root. The usually underground portion of a plant that lacks buds, leaves, or nodes and serves as support, anchoring the plant to the soil. A root draws minerals and water from the surrounding soil, and sometimes stores food.

<u>Rootball.</u> a, The collective mass of roots and soil in the pot of a containerized plant. b. The collective mass of roots and soil attached to the base of a bare rooted plant.

Scion. A plant part (detached shoot or twig containing buds from a woody plant) inserted into a root stock during grafting.

Seed. A ripened plant ovule containing an embryo.

Seedling. A young plant that is grown from a seed.

<u>Seedpod.</u> 1.a. A dehiscent fruit of a leguminous plant such as the pea. b. A dry, several-seeded, dehiscent fruit. Also called seedpod (follicle). 2. A dry, single-chambered fruit that splits along only one seam to release its seeds.

Stamen. The pollen-producing reproductive organ of a flower, usually consisting of a filament and an anther.

<u>Stem.</u> a. The main ascending axis of a plant; a stalk or trunk. b. A slender stalk supporting or connecting another plant part, such as a leaf or flower.

<u>Stigma.</u> The receptive apex of the pistil of a flower, on which pollen is deposited at pollination.

Stock. A rooted plant into which a scion is inserted during grafting.

<u>Style.</u> The usually slender part of a pistil, situated between the ovary and the stigma.

Terminal bud. The apical bud. •

For more Information Write to: The Plumeria Society of America Inc. P.O. Box 22791, Houston, TX 77227



P. 'Albina'



P. 'Albina' photos by Fred Yoder

New in 2000 P. 'Albina'

Very light creamy pink, large golden yellow center ½ of petal radiating out to bright yellow, solid light pink outer edge band on back, tenancy to fade high, front fade almost completely to white leaving radiating bright yellow from center and solid pink band on back showing through, long oval petals with up turned inner edge, rounded tips moderate overlapping, light texture, 2-1/2" dia., strong lemon-jasmine fragrance, keeping quality fair.