PLUMERIAS IN SE TEXAS

Rosemary C. Miller, BS, MSEd
Nederland, TX
Master Gardner, Jefferson Co., TX
FOR THE LOVE OF PLUMERIAS

One is not enough!
Plumieholic

An individual who is addicted to Plumerias
Plumerias are known by many names

- **English Names:**
  - Pagoda Tree, Frangipani, Dead Man’s Flower, Temple Tree and Graveyard Tree

- **The generic name** *Plumeria* **came from the French traveler and botanist Charles Plumier (1664-1706)**

- **Family:** Apocynaceae

  There are 31 identified types of which the most common are acutifolia, alba and ruba
Myths and Legends

- Graveyard Tree and Dead Man’s Flower –
  In the areas of the world where Plumerias are a native, such as Mexico, India and the Asian Pacific, they are often planted near cemeteries and churchyards, temples and holy places thus the names.

- The Plumeria was considered unlucky when it was first introduced in 1860 to Hawaii because of its association with death. However when it was noticed how easily the plant grew new flowers from broken branches...how it flowered when there were no leaves, and thanks to its medicinal properties, it began to be more associated with life. (Source: Dr. Richard Criley & Jim Little)
Many people associate the word “Plumeria” with the fragrance used in soaps, lotions, candles and air fresheners. The fact is, the fragrance of a Plumeria depends upon the individual cultivar and is as varied as the flowers themselves.
'I got leid in Hawaii'

Plumerias are widely known as the “Lei Plant”
Leis that are made from Plumeria are called Melia Lei

Picture courtesy of Alan Bunch
In SE TX Plumerias provide flowers for your hair!
Where did you get that Plumeria?

- California, Florida, Louisiana and Texas have many Plumeria growers.
- Imported plants:
  - Thailand
  - India
  - Singapore
  - Australia
  - Puerto Rico
Importing Plants

- Import Permit from the USDA is required
- Plants must be sent with a Phytosanitary Certificate from the country of origin
- Plants usually clear customs in Dallas
- Plants are then sent to the USDA Inspection Station in Humble, TX to be cleared for entry into the US.
- If a plant fails inspection it is usually destroyed and the importer is notified.
1. PERMIT NUMBER
37-87525

2. EXPIRATION DATE
SEPTEMBER 30, 2009

3. NAME AND ADDRESS OF PERMITTEE (Include Zip Code)
(Rosemary C. Miller
1604 N. 27th St.
Nederland, Texas 77627

4. UNDER AUTHORITY OF THE PLANT QUARANTINE ACT, AS AMENDED, PERMISSION IS HEREBY GRANTED TO THE PERMITTEE TO IMPORT IN ACCORDANCE WITH 7 CFR 319.37

5. THE PLANTS OR PLANT PRODUCTS SPECIFIED BELOW WERE GROWN OR REPRODUCED IN:
Various Approved Countries

6. THROUGH THE PORT OF:
New York, NY (incl. Linden, NJ)
Honolulu, HI
Orlando, FL
Houston, TX
San Francisco, CA
Los Angeles, CA
Seattle, WA
Miami, FL

7. DESIGNATION OF PLANTS OR PLANT PRODUCTS:
ADMISSIBLE NURSERY STOCK, PLANTS, AND ROOTS NOT SUBJECT TO POSTENTRY QUARANTINE SEEDS OF TREES AND SHRUBS AND ALSO SEEDS COVERED IN PART 319.37-6

Please refer to the list of prohibited plants and seeds, in the enclosed Part 319.37 (Quarantine 37). It is your responsibility to import only admissible plants and seeds. Prohibited plants and seeds included with any importation will be refused entry.

All plants and plant parts of the subfamilies Aurantioideae, Rutidoideae, and Toddalioideae of the botanical family Rutaceae are prohibited. Rutaceae seeds are enterable under written permit, treatment is required if the shipment is from certain countries listed in CFR 319.37-6(e).

Importers of all plant material should pay particular attention to the enclosure concerning endangered species "Dear Applicant/Permit Holder". The plants listed regardless of origin, must be accompanied by documentation required by the CITES requirements. These documents must be obtained prior to importation of plants into the United States.

If you have received the enclosed shipping labels (PPQ Form 508) to enable foreign shipments to enter the U.S. under this permit, the label must be securely attached to the exterior of each package bearing the designated Plant Inspection Station address. DO NOT PLACE ANY OTHER DELIVERY ADDRESS ON THE OUTSIDE OF THE PACKAGE. ALL COSTS AND ARRANGEMENTS FOR TRANSPORTATION TO AND FROM THE INSPECTION STATION IS THE RESPONSIBILITY OF THE IMPORTER.

Any alteration, forgery, or unauthorized use of this Federal Form is subject to civil penalties of up to $250,000 (7 U.S.C. s 7734(b)) or punishable by a fine of not more than $10,000, or imprisonment of not more than 5 years, or both (18 U.S.C. s 1001).

This permit does not authorize the importation of any genetically engineered plants or products thereof. To import such plants (or to move them interstate), write to Biotechnology Regulatory Services, Permits, USDA, APHIS, 4700 River Road, Unit 147, Riverdale, Maryland 20737-1237.

8. SIGNATURE OF AUTHORIZING OFFICIAL
Carolyn F. Fitzgerald
(877) 770-5990
8/4/04

NOTE: A PHYTOSANITARY CERTIFICATE MUST ACCOMPANY ALL PROPAGATIVE MATERIAL.
This Package Contains
PLANT QUARANTINE MATERIAL

DELIVER TO
U.S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE

19581 Lee Road
Humble, TX 77338

37-87525

PERMIT NO.

PPQ FORM 508 (JUN 2004)
## I. Description of Consignment

<table>
<thead>
<tr>
<th>Name and address of the Exporter</th>
<th>Declared name and address of Consignee</th>
</tr>
</thead>
<tbody>
<tr>
<td>SALLY XIAO</td>
<td>ROSEMARY MILLER</td>
</tr>
<tr>
<td>779 FAIRFAX STREET 71</td>
<td>1604 27TH STREET</td>
</tr>
<tr>
<td>#15 - 405 Singapore 51777</td>
<td>NEDERLAND, TX 77037</td>
</tr>
<tr>
<td>UNITED STATES</td>
<td>UNITED STATES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of produce / Botanical name of plants</th>
<th>Quantity declared</th>
<th>Number and description of packages</th>
<th>Place of origin</th>
<th>Distinguishing marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLUMERIA CUTTINGS</td>
<td>2 (UNBR)</td>
<td>NA</td>
<td>SINGAPORE</td>
<td>NA</td>
</tr>
</tbody>
</table>

Declared means of conveyance: AIR  
Declared point of entry: TEXAS  
Declared date of shipment: 08/07/2005

## II. Additional Declaration

- Not Applicable

## III. Disinfection and/or Disinfection Treatment

<table>
<thead>
<tr>
<th>Date</th>
<th>Treatment</th>
<th>Chemical (active ingredient)</th>
<th>Concentration</th>
<th>Duration and Temperature</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

This is to certify that the plants, plant products or other regulated articles described above have been inspected and/or tested according to appropriate official procedures and are considered to be free from the quarantine pests specified by the importing country and to conform with the current phytosanitary requirements of the importing country, including those for regulated non-quarantine pests.

(Tulang Eric Casiano)  
07/07/2005  
for Director-General  
Agri-Food & Veterinary Services

No financial liability with respect to this certificate shall attach to the Agri-Food and Veterinary Authority of Singapore or to any of its officers or representatives.

**IT SHALL BE UNLAWFUL FOR ANY PERSON TO ALTER, DEFACE OR WRONGFULLY USE THIS CERTIFICATE**
The Dreaded Disposal Notice

U.S. DEPARTMENT OF AGRICULTURE
ANIMAL PLANT HUSBANDRY INSPECTION SERVICE
PLANT PROTECTION AND Quarantine
MAIL INTERCEPTION NOTICE

The material described below was found to be moving in the mails in violation of the Agriculture Quarantine Regulations pertaining to the entry and movement of plants, plant products, animal products, wool, and plant pests. These violations may result in criminal or civil penalties in the hands of the Department of Agriculture. All persons receiving notice are advised to remove the material at the soonest moment and proceed to destroy it where it is found. Any person may be fined or imprisoned under this authority of law administered by the U.S. Postal Service, U.S. Customs Service, and U.S. Department of Agriculture. All persons are requested to contact the Department by telephone at the number below or by mail return this form to the Department of Agriculture, Animal and Plant Health Inspection Service, 1000 New Jersey Avenue, S.W., Washington, D.C. 20250.

From:
Rosemary C. Miller
1604 27th St.
Nederland, Texas 77627

To:
Chalitpun Banyasingh
9/14 Pratamnuch Rd.
Bangmad, Jomtong
BKX, Thailand 10150

Material Intercepted:
1. Plumeria sp. plant

Postmark:
Thailand Post

Date:
10/25/06

Breakage:
None

Reconditioning Required:
No

Quarantine on Arrival or Disposal:
7 CFR Part 319.37

Disposition:

- Prohibited material removed and destroyed
- Container and contents destroyed
- Package returned to origin

Reason for Disposition:

- Address, after due notice, failed to apply for permit required by law.
- Material not authorized entry.
- Material not authorized entry.
- Material not authorized entry.
- Material not authorized entry.
- Material not authorized entry.
- Material not authorized entry.
- Material not authorized entry.
- Material not authorized entry.
- Material not authorized entry.
- Material not authorized entry.

- Other (Specify):

Plant exceeds plant size and age limitation.

Inspection Information:

Olga V. A. Jensen
PLUMERIAS ARE TREES

A large Pudica Plumeria growing at the Jim Little Farm

Photo courtesy of Jim Little
LIGHT REQUIREMENTS

- PLUMERIAS PREFER FULL SUN, but they must be worked up to it gradually if they have been shaded for a long time. Even stems may sunburn when brought out from winter storage if not exposed gradually to the full sun.

- 6 to 8 hours of sun each day is needed for blooms
WATER REQUIREMENTS

- Plumeria stems store moisture for extended periods.
- Water them well only after they have begun to dry, but be sure that all water drains away. THEY DO NOT LIKE WET FEET.
- Plumerias like to be damp, not soggy, and not completely dry except in the winter.
- In the winter they should be very dry in order to avoid stem rot.
FERTILIZER

- Plumerias are heavy feeders.
- Prefer rich organic matter - compost
- Commercial fertilizers need to be a balanced fertilizer. Dynamite 13-13-13 is a favorite with me.
- Rosemary’s Mix - Fish Emulsion, Epson Salts, Blackstrap Molasses and left over carbonated drinks, beer, wine or liquor mixed in water.
Feeding the Plumies
Re-Potting and Topping Soil

- Spring brings new growth and the need for larger pots.
- Plants that are not re-potted are topped up with new soil. This is accomplished by removing some of the old soil and applying new soil to the pot.
My Preferred Mix
BLOOMS

- The time required for a Plumeria to produce blooms depends on the manner in which a plant was started.
- Mature plants will bloom over a long period with flowers beginning in the early spring and often they will continue blooming into the late fall.
- Colors range from white to rainbows and the shape of the flowers are as varied as the plants.
Plumerias can be pruned at any time with a sharp knife. The cut should be made at an angle so the cut will not hold moisture. The plants will "bleed" their latex sap, but the bleeding usually stops in an hour or so.
Why Prune?
Propagation of Plumerias is achieved by one of five methods:

- Seeds
- Rooted Cuttings
- Air Layering
- Grafting
- Budding
Plumeria seeds grow in pods which take about 9 months to mature.
Plumeria seeds are unique in that they don’t produce a plant which is identical to the mother plant.

8 new pods formed on Boon Yen

Double pod on Meteor
Once a seed pod is mature it slowly opens and if it has not been covered with net or other materials the seeds often fall to the ground or blow away in the wind.
Seeds are first soaked for 24 hours and then placed between two moist paper towels and inserted into a plastic Ziploc bag. The bag is then placed in a warm area with indirect sunlight and left to germinate.
After germinating, the seeds are now ready to be planted.
The seeds are then placed in Cactus Mix or other fast draining soils.
Once the seeds are planted they are put into the greenhouse. These seedling were planted in June.
A mini greenhouse made from a 2 gallon Ziploc bag and wooden skewers
As the seedlings grow they are then transplanted into one gallon pots. Each seedling is unique and will be known as a “seedling of”
Cutting

Produce a plant that is identical to the mother tree

• Cuttings should be at least 12 inches long
• Dip the cut end in rooting hormone
• Allow them to dry in a ventilated area for a few days
• Plant cutting 3 to 4 inches in mixture of at least 50% Perlite and soil. Some prefer lava rock for rooting.
• Bottom heat is necessary for rooting.
Rooting Tubes
Plumeria cuttings in rooting tubes
Commercial Rooting Tray
Gang Rooting
Cuttings which have calloused and are ready to put out roots

Courtesy of Mark Terrill
Rooted cutting taken from tube
Air Layering

Steps in Making an Air Layer

1. Cut 1” girdle and remove strip of bark from around the branch.

2. Wrap moist sphagnum moss that has been sprinkled with a rooting powder around the branch. Surround the girdle with plastic and tie.

3. When roots appear, cut below the moss and plant directly into a potting soil.

Courtesy Jim Little
Air Layering in Thailand

Courtesy of Luc Vannorbeeck
Grafting

- Types of grafts
  1. “V” shaped grafts most common in Thailand
  2. Slant “\” graft is most common in the US
  3. Bud grafts
Why Graft?

1. Rare or hard to root plants are often grafted
2. Faster than rooting a cutting
3. Stronger root system
4. Several plants from one cutting
Grafting tools

Courtesy of Luc Vannorbeeck
Grafting supplies

Courtesy of Luc Vannorbeeck
In Thailand, bud grafting is very popular because many plants can be made from one cutting.

Courtesy of Luc Vannorbeeck
Bud graft as it matures

Courtesy of Luc Vannorbeeck
Variegated Plumerias
Plumeria.... Head Aches and Heart Breaks!
Insect Enemies

When a Plumeria is attacked by insects it is usually because the plant is stressed.

- Spider Mites
- White Flies
- Thrips
- Mealy Bugs
- Scale (Homoptera: Coccidae)
- Plumeria Borer - usually found in Hawaii
Spider Mites
White Flies
Thrips
Mealybugs
Leaf damage caused by Mealybugs
Scale
Plumeria Borer

Courtesy of Jim Little
Diseases

- Rust
- Black Tip
- Stem Rot
- Powdery Mildew
- Leaf Spot Disease (Anthracnose)
Rust is a common problem in areas with high humidity
Rust on underside of Plumeria leaf
Black Tip
New growth after blacktip
Stem Rot
Stem Rot
Stem Rot in cuttings
Hurricanes and Tropical Storms
With a little warning
WINTER BRINGS DORMANCY

Alan Bunch standing by a large dormant Plumeria tree in Hawaii

Photo courtesy of Alan Bunch
Plumerias grown in SE TX must be stored in the winter; therefore, they are often grown in pots.
December means clipping the leaves and a move into the greenhouse for Plumerias grown in SE Texas!
Leaving a very bare yard!
For SE Texans who grow Plumerias in the ground, it is “dig up time”

Courtesy of Emerson Willis
For those without a greenhouse, storage is found in other areas.

Courtesy of Emerson Willis
In colder areas of the US, Plumerias are often grown under lights because of the short growing season.

Courtesy of Scott Lawder
Overland Park, Kansas
Next Spring
it starts all over again!
WHY THE BOTHER?
Friends with common interests
Rosemary Miller
Membership Chairman
The Plumeria Society of America, Inc.
P O Box 22791
Houston, TX 77227-2791
www.ThePlumeriaSociety.org
The PSA has sales each year in June and August
Fred guarding my buggy!
Buyers travel from California, Louisiana and Florida to the sale.
Florida and Louisiana buyers
Danny Kashou of the So. CA Plumeria Society and Emerson Willis of Baytown
International Plumeria Conference
STAY TUNED
FOLKS........THE BEST IS YET TO COME! 😊
Come and visit my Plumie Patch