

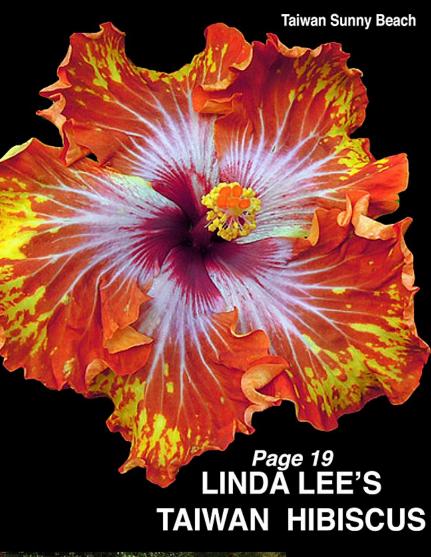
## HIBISCUS INTERNATIONAL

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#### **HOW TO POLLINATE YOUR HIBISCUS**

A video by E. A. Fitchl

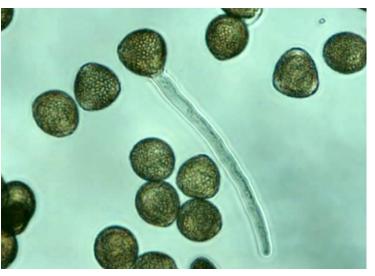


Do you want to learn how to pollinate Hibiscus? Then this video on the IHS website will give you good guidance. I love the idea of keeping a Q-tip covered in pollen in one of those little snap cap vials which you can find on Ebay if you do a search for "micro centrifuge vial". They come in different sizes and this one looks like the 1.5 ml size.

Once the pollen has been collected, I keep mine in the fridge in an airtight container and I've had success with it after 3 days. If you want to keep it longer, then freezing is the answer but, if you do freeze pollen, then it has to be bone dry before it goes in the freezer. Any moisture will cause the pollen to fracture as the water turns to ice. I dry mine over silica gel for a couple of days if I want to freeze it.

When you take it out of the freezer to use it, you have to leave the micro vial sealed until the pollen stabilises to room temperature. There is an article all about how to freeze pollen on page 16 of Hibiscus International No.59. Click on the 'web link' here to link through to the magazine.





On the left are pollen grains seen under a microscope (although these may not be Hibiscus pollen) and you can see that one of the grains is growing a long tube.

This tube has to grow right down through the whole length of the pistil (the long stalk at the centre of the flower) until it reaches the ovary at the bottom where it fertilises the ovules which will become seeds.

Hibiscus flowers have such long pistils that it is amazing to think how quickly the pollen tube has to grow to reach the ovary before the flower withers and drops away. It's no wonder that so many crosses don't 'take' and that Hibiscus seeds are so precious!

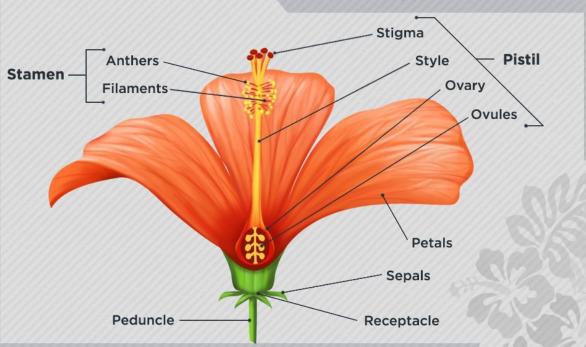


#### Male part-Stamen

The stamen has two parts: Anthers- Pollen producing part Filaments- They hold up the anthers

#### Female part- Pistil

The pistil has three parts: Stigma- Sticky surface at the pistil's top, where the pollen germinates Style- Holds up the stigma Ovary- Contains the ovules Ovules- Become the seed after fertilization by pollen



#### Other parts of the flower

Petals- Usually bright, to attract pollinators Sepals- Protect the flower bud when it is developing Receptacle- Portion of the stalk with the flower structure Peduncle- Flower stalk

#### - HOW TO -DRY SEEDS AND STORE THEM PROPERLY



In "Breed your own Vegetables" by Carol Deppe in a section on storing and drying seed including Hibiscus in general she states: "Seed dried at room temperature usually has a moisture content of 10 to 20 percent. That is not dry enough to store in airtight containers or to freeze. Such seed should be stored in paper envelopes or bags or other containers that allow some air exchange. Seed stored in paper is subject to attack from insects or pests however. In addition, many kinds of seed have insects or insect eggs in them as they come from the field. Such seeds will be destroyed inevitably if we do not take measures to kill the insects or insect eggs.

Freezing is a good preventative measure. Only very dry seed can be stored in plastic bags, jars, or other airtight containers. And only very dry seed can be frozen.

To dry seed to the very dry stage for freezing or storing in airtight containers, you can use either silica gel or a food

dehydrator that has a thermostat. (You can not use a home oven.) You set the thermostat to 95 degrees F and dry the seeds for up to about 8 hours. If you use equal weights of seed and silica gel, a few days or less is usually sufficient. Silica gel is likely to be most useful for small amounts of seeds".

#### CHARLES BLACK (ON THE HIDDEN VALLEY HIBISCUS FORUM) SAYS:

Fresh seeds put into an air tight zip lock bag can develop mold that kills them. It's best to make sure the outer coat of the seeds has dried before they get locked into an air tight bag, particularly if the seeds come out of a pod that is still fresh and not dried crispy. It only takes a day or so for them to dry sufficiently. Another method I have used is to put the seeds inside the bag but not close the bag for a couple of days. It's very frustrating to open a bag of great seeds only to find that they have molded and are no longer any good. The best method of all is to plant the seeds while fresh - no nicking needed and maximum germination rates.

You can tell when you nick them if they need it or not. If the knife slices easily through the seed coat, like going through refrigerated butter, then they are fresh enough to plant without nicking. If the coat resists the blade and feels hard as you do the first nick then the nick is needed for best results.

Some people believe seeds should be planted in spring as Mother Nature does it but hibiscus are tropical and there is no real spring for them in the tropics. I germinate them anytime of year but if it's in winter I find the warmest place possible to grow the seedlings after they germinate because they do like it warm. A little heating mat made for this purpose takes care of that if there is no better solution.

If seeds dry out too much they no longer are viable but what is "too much" depends on lots of factors. How long have they been stored, what conditions are they stored in, how hot, how humid, etc. I've known of seeds that did not germinate that were then recycled into potting mix only to sprout months later in the pot with whatever plant was planted in the mix. I've also had some great seeds go bad on me after several years storage during which they spent some time in a hot environment. I tried to germinate some seeds like that earlier this year and only 2 of 100 germinated. With fresh seeds I usually get about 70 percent that germinate and live long enough to be potted up.

The safest thing to do is to plant them as soon as possible but if they must be stored then a dark and cool location inside an airtight bag is likely to give the best results. The main caution is for there not to be so much moisture in the bag or on the seed that mold starts growing. (www.hiddenvalleyhibiscus.com > forum)

#### DRYING AND STORING SEED CONTINUED

#### The following method using rice was found at: http://realseeds.co.uk/Drying.html

Seed that is air-dry is not really properly dormant - it's just napping - so it is still burning through its stored reserves of energy and will soon run flat - like a mobile phone left on.

Probably the easiest method of drying seed at home is to use silica gel, which you can get on Ebay. Another method is to use something we all have in our kitchen cupboard .. rice.



#### Method: you will need:

- a big jam-jar with a good lid,
- an old pair of tights,
- a rubber band,
- and some rice

You need to use at least twice as much rice as you have seed. It doesn't matter if you have too much rice, but too little won't work.

Bake the rice on a tray in the oven for 45 minutes until it is bone dry (but not burnt). While it is still hot, put it in the jam-jar, about half full, and screw the lid on .

Wait patiently until the rice is cool. (If you rush this you'll cook your seeds.) So you now have a jam jar 1/2 full of very dry, cool rice.

Put your seed in a bag made by cutting off the foot of the tights, and tie

it in with a rubber band. Put it in with the cool dry rice and screw the lid on tightly, so damp air can't get in.

Leave your seeds sealed in the jar with the dry rice for a fortnight, and the dampness in the seeds will be drawn out into the rice. You now have bone-dry seed that you can safely seal in a plastic bag, and it should keep for several years.



#### THINKING ABOUT SEEDLINGS



Seedlings flower after 1 to 2 years, though some do in 9 months. Some can take 10 years or more and some never do. If you don't admire the seedling's bush and it is not budding up after several years and you don't have the space to keep it, send it to Hibiscus heaven – there are plenty more seeds out there, even from the same cross and it is quite likely you'll get one with much better traits! Everyone has their own way of raising them and no doubt we will all tweak little things to suit our own situation. There is one more bit of advice .. if you don't want to have all your seedlings needing potting up at the same time or at close intervals, why not stagger the germinations a few weeks apart and save yourself from having to pot up several trays full of babies all in one go!



## - HOW TO OVERWINTER TROPICAL HIBISCUS



Also check out the excellent advice on overwintering given by Hidden Valley Hibiscus. Their main tip is: "The most important consideration for tropical plants like hibiscus is staying warm in winter. Heat is more important than light or anything else."

Please click on the web link below to visit their website for lots more information.



#### - VIDEO -EIGHT HOMEMADE ROOTING HORMONES

Video by GKVK



This video shows eight different natural rooting hormones or root stimulating substances that can be easily used for plant cloning in gardening.

In horticulture, cloning means making duplicate plants out of branch or stem cuttings from a mother plant. It is a great way to multiply a plant, especially if it's a rare variety or very precious to you or if you want to gift some plants to your friends and neighbours.

The simplest way of cloning a plant is just pinching a small branch or stem cutting and inserting it into the soil. But, the success rate of this cutting is generally low. If you want to increase the success rate, then you need to follow certain simple rules to accelerate the root formation and increase the success rate of cloning.

Most plant cuttings will naturally produce their own rooting hormones after a short period of time. Actually, many plants can be easily cloned by simply placing the cutting in some clean water and following some simple rules.

Rooting hormones can be natural or synthetic chemicals and contain Indole butyric acid (IBA) and naphthalene acetic acid (NAA). IBA is the natural plant auxin or hormone responsible for the stimulation or the formation of roots. If you are purchasing these commercial rooting hormone powders, make sure to check composition on the label that they contain at least one of these compounds.

The above has been adapted from the text which appears below the video on YouTube which has been produced by https://www.gkvks.com/

#### **HIBISCUS ART AND CRAFT**







In Praise of God – the work of my hands over the years One of my favourite quotes: If you don't succeed at first, pray for wisdom, then try, try again until you achieve!





Above: Artist Janet Lim continues to engage us with her beautiful Chinese brush paintings of hibiscus. To find out more about Janet's art, please see the article about her painting technique in issue No.62 of Hibiscus International ... you can click on this link:





Kenneth Cobonpue is a multiawarded furniture designer and manufacturer from Cebu, Philippines.

Inspired by a delicate blossom (which could very well have been a Hibiscus), this swivel armchair called 'Bloom' is composed of hundreds of fine running stitches that radiate from the center of the seat.

You can read more about Kenneth and see his other designs by clicking on the link below.



Website: Kenneth Cobonpue

#### PRIDE OF HANKINS **AS A PARENT**

Landersaii, aka Pride of Hankins, is a vigorous hibiscus more usually grown for use as rootstock for grafting. It's fully double, bright raspberry-red flowers are, however, very attractive. These growers all nurtured seedlings from Pride of Hankins and the results are shown here.









Johan Springer Bridgetown, **Barbados** 

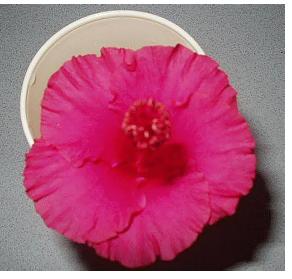
Above, Johan said: "After a lot buds dropping off, one finally opened. The mother is Pride of Hankins x Zion Petaluna (not registered). The bloom is an orange red colour, a miniature double (4 inches). Working name (Zion) Fire Fairy."

On the right: Jacob Terry says this was his first seedling ever to bloom (Pride of Hankins x Unknown).

Below: Brian Kerr managed to grow some 'selfed' Pride of Hankins, and two of the resulting offspring are shown below. Brian says that PoH probably has H. schizopetalus in its ancestry as the traits sometime appear in frilled petal edges. The seedlings can be either single or double as shown below.









Brian Kerr Australia

#### ORGANIC SLUG CONTROL?





Do you have a problem with slugs and snails? Living in the UK, I certainly do .. especially if I leave my hibiscus plants outside on a damp night. Recently I met someone who recommended this product which is made from wool. Yes, wool! I haven't tried it yet myself, but I was interested to read the following reviews on Amazon:

"I'd never heard of this until I saw it on gardeners world. We have an annoying slug problem (as I think most gardens do) and we also have a small dog so slug pellets are out of the question. I really dislike the little blighters .. especially when they have tucked into my lilies and dahlias. I decided to give this stuff a go. You put it around the base of your plant making sure it's about 6 cm wide. It doesn't have to be piled high .. it's more about the width. Once you've done that you water it and it creates a texture that slugs and snails don't like to walk (or slime) on. I have to say it's been pretty successful. My dahlias have recovered and are getting established. The only downside is after about two weeks the wool becomes less fluffy and not so unattractive to slugs. I did discover a slug trail across the wool in one pot. How dare they! So I reckon you should replenish this after it's been down a couple of weeks. This does make it quite expensive but I suppose you have to offset that against protecting expensive plants. I would definitely use this again and would probably order a big tub to make it more economical in the long run. As slugs and snails are here to stay I think I will always need to keep a supply of this in the shed. Much better than beer in jam jars and safe for pets too. It does also have some nutrients in so your plants will be doubly happy."

Someone else wrote: "I like these because we have pets, birds and visiting hedgehogs so I don't like to put pellets down. Our garden is also surrounded by several which are now paved so it's important to me to preserve our little eco system. Tips: use plenty. Don't skimp or they really won't work. You need to put enough down to form a carpet round each seedling and then the slugs and snails will stay away long enough for the plants to establish.

PS The garden will smell of damp sheep, but it doesn't last and it's amusing to watch the cat wonder where I've hidden the sheep."

Finally, from someone not so impressed with this product: "From a slug perspective, this product is FANTASTIC. A warm, cushioned mattress-like surface that they can laze around on as they munch through the nearby vegetables and fruit. Once there are no more leaves left to chomp through then they can just slither across the wool, feeling that lovely softness on their full bellies, back to their homes and procreate away ready to introduce their dear offspring to the remains of the wonderful feast from the night before. From the perspective of a vegetable patch owner, TERRIBLE."

# The Weird and the Wonderful THE SLUG THAT BEHAVES LIKE A LEAF - A plant/animal hybrid -



Image ©Patrick Krug

Elysia chlorotica is a lurid green sea slug, with a leaf-shaped body, that lives along the Atlantic seaboard of the USA. What makes it unique is its ability to run on solar power. Other animals are able to harness sunlight after eating plants, but this is only because they acquire entire plant cells, which is very different to transforming an animal cell into a solar-powered plant-animal hybrid. There is no way on Earth that genes from algae should work inside an animal cell .. and yet here, they do.

## TRAINING YOUR HIBISCUS TO GROW UPRIGHT

By Wendy Williams



When I first started growing hibiscus I soon learned that it was a good idea to tie young plants to a solid stake. First of all it helps to stabilise the whole plant and secondly, the stake is then in position when it becomes necessary to tie up the first branches and train them to grow upright. An awful lot of hibiscus start out growing upright and then, because of the weight of the leaves on the branches, they begin to bend over towards the ground. These first branches will thicken as they mature and, if you have trained them upright, they should eventually stand alone so that the plant develops into a nicely shaped bush.

After the first season of flowering, I usually pinch out the tip .. or even reduce the plant to about 2 -

3ft high if it has become very tall as some seedlings are prone to do. Pinching not only encourages branching but causes the main branch to thicken because you have removed the tip. Typically, the end of a branch contains an apical bud, which is the location where shoot growth occurs. The apical bud produces a hormone, auxin, (IAA) that inhibits growth of the lateral buds further down on the stem. This is called 'apical dominance'.

You can, of course, pinch out the growing tip before the seedling has bloomed but, as this will delay those exciting first blooms, I always do it afterwards because I'm too impatient!

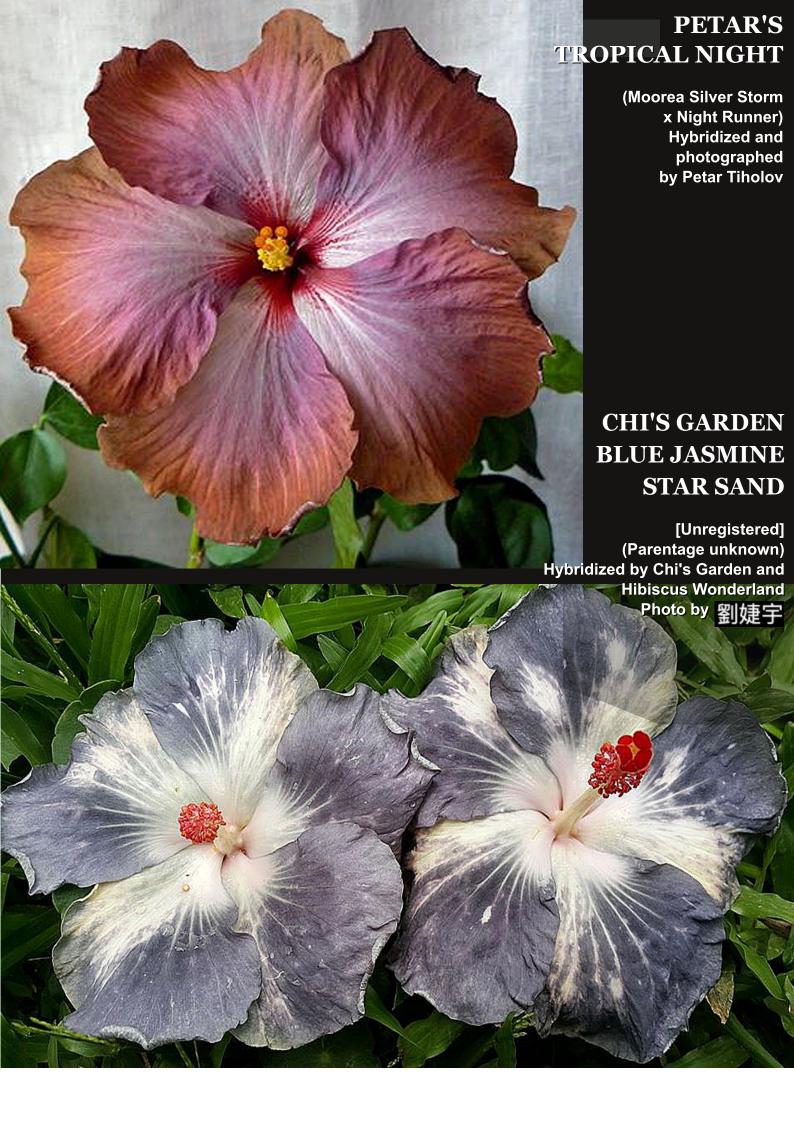
## A CELEBRATION OF BEAUTY

A selection of fabulous photos shared by members of the International Hibiscus Society

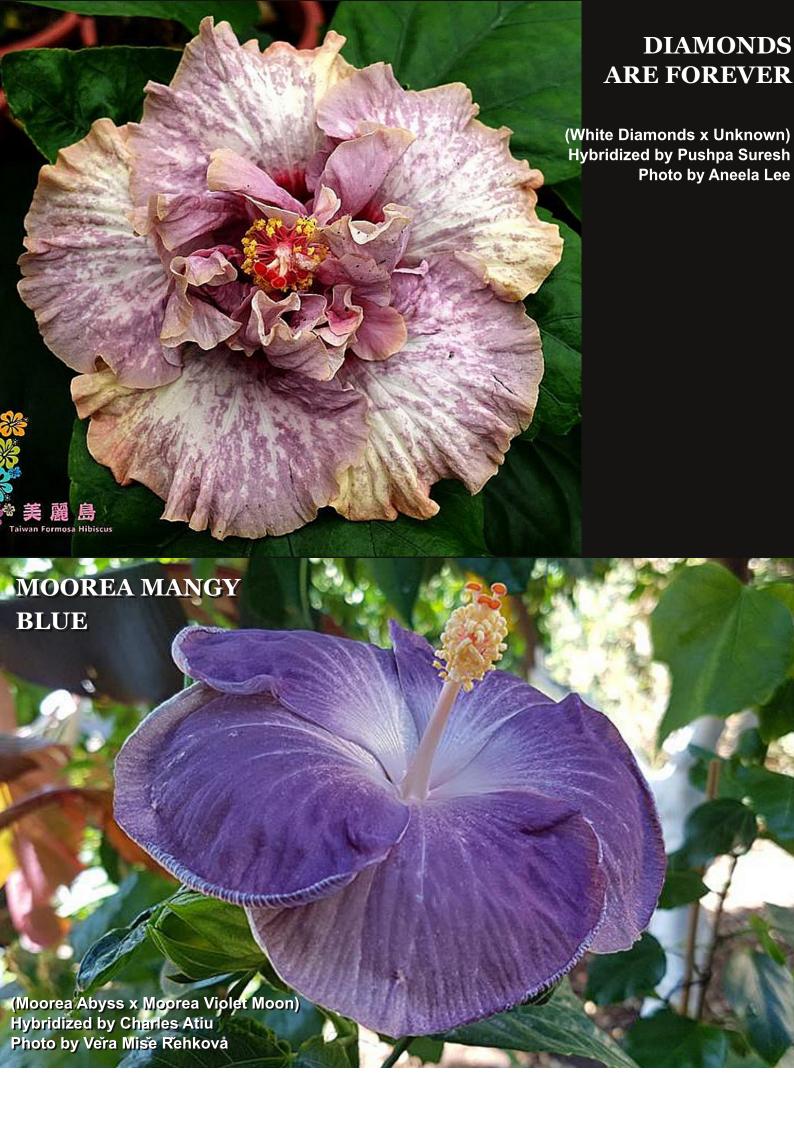


#### **MIDNIGHT LADY**

(Remembrance x Eye of the Storm)
Hybridised and photographed by Ursula Lengdobler









### SNOW ON THE MOUNTAIN

(China Pink x Gray Ghost)
Hybridized by Dupont Nursery
Photo by Petar Tiholov





#### **GHOST ELVES**

[Unregistered] (Parentage unknown) Photo by 花花香





cuttings (although she seems to have sold out of seeds at the moment). I have bought seeds from Linda myself and was very pleased with the germination results. Click below to visit her website.



van Hibiscus - Linda Lee

Collection Taiwan **Tahitian** 















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