

FLORIDA WEST COAST BROMELIAD SOCIETY

1954-2018

Celebrating over 65 Years in Bromeliads

fwcbs.org



July 2019 Newsletter

NEXT MEETING

Date & Time: Tuesday, July 2, 2019; 7:30 pm
Location: Good Samaritan Church
6085 Park Boulevard
Pinellas Park, Florida 33781

PROGRAM

Bruce Holst, Director of Botany at the Marie Selby Botanical Gardens in Sarasota, Florida, will be our July speaker. In his presentation titled *New Discoveries in Belize*, he will share stories and images of the work he has done during the past three years to inventory epiphytic plants of Belize, particularly bromeliads. This work has identified many new species in Belize, including some species previously unknown to science. Bruce has studied plants for over 40 years and participated in over 25 international plant research and collecting expeditions; his main area of interest is the study of plant diversity and distribution in the American Tropics. He is on the editorial boards of the Selby Gardens' research Journal *Selbyana*, and *The Journal of the Bromeliad Society International*.



LAST MEETING HIGHLIGHTS

LAST MONTH'S PROGRAM

In his talk titled *Growing Bromeliads from Seed*, **Jay Thurrott** described his preferred method of propagating bromeliads from seed, a method he says has given him a very high germination rate. Jay has been growing bromeliads since the 1970s and has over 700 varieties at his home in Port Orange, Florida. This is a summary of his presentation.

There are several ways to reproduce bromeliads.

- Offsets (pups) typically reproduce an exact copy of the mother plant but sometimes can be unstable and have different variegation.
- Seeds can be harvested from a fertilized plant but there will be some degree of variation in the offspring produced.
- Tissue culture is essentially 'cloning' a plant, using its tissue to propagate new plants that are almost always identical to the parent plant.
- There are three types of bromeliad seed forms: 1) berry-like seeds (e.g., Aechmea, Neoregelia, Billbergia, Cryptanthus); 2) winged seeds with feathery plumes in dry capsules (e.g., Tillandsia, Vriesea, Guzmania); and 3) wingless seeds in dry, flat, disc-shaped capsules (e.g., Pitcairnia, Puya, Dyckia, Hechtia)
- Jay prefers to use Aechmea and Billbergia to propagate from seed because he feels these are the easiest to harvest and the quickest to germinate.
- After flowers are pollinated, they grow into seeds and cause the ovary, i.e., seed pod, to swell. Jay showed pictures of the berry-like seeds from an Aechmea seed pod that change color as they ripen. These kinds of seeds can have a sweet, syrupy material around them that needs to be washed away for better germination.
- Jay cautioned that seeds will not mature if the mother plant's inflorescence (bloom stalk) is removed from the plant too soon.
- After he harvests the seeds, Jay places them on a growing medium. One medium he has tried is sphagnum moss pellets. He first hydrates the pellets and then places the seeds on top of the pellets where they are left to grow. But Jay prefers to use regular potting soil. He places the seeds on top of the soil in a small container, which he puts in a plastic bag that acts as a small green house.
- Jay then places the sealed bag and its contents in his shade house or in his yard in low light to wait for seedlings to emerge. In about five to six months, the seedlings will be ready to pot. Problems that affect seed propagation outcome can include squirrels, lubber grasshoppers, and fungus.

For more information about growing bromeliads from seed, see the article attached at the end that summarizes a talk Marty Baxley gave to our group in August 2014 on the topic.

SHOW AND TELL

Dick Dailey	<i>Vriesea</i> hybrid, resurrected after time spent in an R&R area in his yard
Barb Gardner	<i>Hohenbergia</i> 'Karla', a sport of <i>Hoh. magnispina</i> (photo below)
Monika Hale	<i>Catopsis floribunda</i> , collected in British Virgin Islands (photo below)
Dennis Hoffman	<i>Tillandsia utriculata</i> , cluster of three from his oak tree (photo below)
Karen Mills	<i>Neoregelia</i> 'Grace'
Richard Poole	<i>Ursulaea macvaughii</i> bloom stalk (photo below) The plant's large size and vicious spines made it hard to transport the whole plant.
Jose Rosado	<i>Fosterella villosula</i> (photo below) <i>Fosterella penduliflora</i> (photo below)

SHOW AND TELL PLANTS



Hohenbergia 'Karla'



Catopsis floribunda



Tillandsia utriculata cluster



Ursulea macvaughii stalk



Fosterella villosula



*Fosterella
penduliflora*

THIS AND THAT

Magic Mike

Perhaps you have noticed the new cordless microphone that was used by auctioneers at our recent auction and by our speaker last month. It is a great improvement over the previous audio system, and we can thank Barb and Gary Gardner for making it available to our society.

BSI Judges School

Four of our members, Suzanne Bogacki, Barb Gardner, Prichard Poole and Joe Ventimiglia, are currently enrolled in the six-session Judges School put on by the Bromeliad Society International. Their first session was last month in Ft. Myers. We know they will study hard and do well!

IN THE GARDEN THIS MONTH



Aechmea smithiorum



Vriesea pastuchoffiana

UPCOMING EVENTS, 2019

June 28-29, Tropiflora Nursery Annual Summer Sale

Tropiflora Nursery, 3530 Tallavast Road, Sarasota, 941-351-2267 (tropiflora.com/events)

August 17-18, Seminole Bromeliad Society and Tropical Plant Society Annual Fall Sale

The Garden Club of Sanford, Sanford, FL (www.sanfordgardenclub.com/sbtps)

September 20-21, Bromeliad Extravaganza®

Orlando, FL, Hosted by Bromeliad Society of Central Florida (www.BromeliadX.com)

October 12-13, USF Botanical Gardens Fall Plant Festival

University of South Florida, Tampa, FL (cas.usf.edu/garden)

October 25-27, Tropiflora Nursery Fall Festival

Tropiflora Nursery, 3530 Tallavast Road, Sarasota (tropiflora.com/events)

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Growing Bromeliads from Seeds and Hybridizing

This is a summary of Marty Baxley's talk titled *Growing Bromeliads from Seeds and Hybridizing* that he presented to FWCBS in August 2014.

Seeds

- To get seeds, one can either buy them or collect them directly from plants.
- There are three types of bromeliad seeds, each specific to one of the three bromeliads subfamilies. [Note: At the time of this presentation, there were just three bromeliad subfamilies commonly used. Since then, the list has expanded to eight by moving certain genera into them from the original three subfamilies.]
 - Sub-family Bromelioideae, such as *Aechmea*, *Billbergia*, and *Neoregelia*, produce berry-like fruits in their blooms. These are typically dispersed by animals and birds that eat the berries. Bromeliads in this sub-family are the easiest to hybridize.
 - Sub-family Tillandsioideae, such as *Vriesea* and *Tillandsia*, have winged seeds with feathery plumes in a dry capsule. These are typically dispersed by breezes until they land on a suitable surface and take hold there. They are the shortest lived seeds, lasting at best six weeks.
 - Sub-family Pitcairnioideae, such as *Dyckia*, *Hechtia* and *Pitcairnia*, have small, wingless seeds, with a hook shape, in dry capsules that settle and grow on soil.



Bromelioideae:
berry-like seeds



Tillandsioideae:
winged seeds, feathery
plumes in dry capsules



Pitcairnioideae:
wingless seeds in
dry capsules

There are multiple methods used in the bromeliad world for growing bromeliads from seed. Marty's demonstration was his preferred method for growing fruit-like, berry seeds from plants in the Bromelioideae subfamily.

Planting and Growing Seeds

- When the seed pod (ovary) is ripe, squirt the seeds out of it and wash them. Then spread them onto paper, fold the paper to retain the seeds and let them dry there for a couple of days. Write the name of the plant from which you got the seeds on the paper, to record the source plant. If you are not going to plant the seeds right away, you can freeze them for up to six months and they will still be viable.

- Newly planted seeds need an environment with 100% humidity. Place a medium appropriate for growing seeds that will retain moisture into a small pot and then place seeds on top of the soil.
- Water the seeds with a spray bottle that also has some fungicide and then seal the pot in a bag (pictures below).



- Place the bag in an environment similar to the one in which you intend to grow the plants. Avoid direct sun; allow only indirect sun.
- Within approximately 30 days, seedlings with tender leaves will appear in the pot. The length of time for this to happen depends on the type of bromeliad being grown.
- Once the seedlings have sprouted you can remove the cover and check on them, but continue to keep them covered until the seedlings have 2 or 3 leaves. When you are confident the bromeliads are healthy and growing well, you can begin hardening off the seedlings, which is to say gradually exposing them to more open air and some direct light (picture on right).
- Methods for growing the three seed types are similar but vary slightly because each type needs different germination media to allow them to adapt to different environments. For example, *Dyckias* grow on top of soil in a pot or other container with or without a cover and will germinate quickly, within two to three weeks. *Tillandsia* seeds need constant moisture and are best begun in a misting house on a fine mesh, which is hard for most hobbyists to achieve,



Hybridizing

- All bromeliad flowers have three sepals, three petals, six pollen stamens (male parts) and one pistil and stigma (female part). The process of hybridization begins with removing pollen from a stamen in one plant and placing it on a stigma in another plant.
- One should determine the time of day when the flowers are fully open and at optimum stage for collecting and placing the pollen. Marty suggests that is typically before 11 am. If the two plants you want to cross bloom at different times, you can freeze the whole flower from the father (pollen) plant until the mother (seed) plant is ready to bloom and then defrost the seeds and proceed with the cross pollination.
- Using long tweezers, pinch pollen from a stamen on the father plant and place it onto the stigma of the mother plant. The ovary, i.e., seed pod, in the mother plant will swell overtime with seeds. You can then harvest the seeds from the seed pod.
- Not all bromeliad flowers are constructed in a manner that allows for easy hybridization. In some it will be more difficult to obtain pollen from a stamen and/or to place pollen on a stigma. In *Cryptanthus*, for example, the stigma is deep inside the flower and hard to reach and you will need to jam the pollen into the bloom.

