

FLORIDA WEST COAST BROMELIAD SOCIETY NEWSLETTER

February 2012



NEXT MEETING

Date: Tuesday, February 7, 2012
Location: Hope Presbyterian Church
1698 South Belcher Road
Clearwater, Florida 33764
Time: Doors open at 7 pm; meeting starts at 7:30

Program

George Aldrich will give a talk titled *Coast to Coast and Border to Border*, a slide presentation about his three-week trip driving across Costa Rica, from the Atlantic coast to the Pacific coast and from the northern border to the southern border. The talk will include his visit to well-known hybridizer Chester Skotak's nursery and the Wilson Botanical Gardens established in the 1960s by well-known bromeliad enthusiasts Robert and Catherine Wilson.

Plant Sales

Mr. Aldrich will be the sole vendor of plants for this meeting and therefore there will be no member plant sales.

LAST MEETING HIGHLIGHTS

Program:

Tom Crocker talked to us about the use of tissue culture for breeding bromeliads. Tissue culture is a method of propagating plants that are clones of each other and have the same genetic information as their parent plant. The process is performed in a laboratory under controlled environmental and sterile conditions. While some growers and nurseries have their own laboratories for tissue culture propagation, there are independent commercial tissue culture laboratories that offer the service, for a fee.



Advantages of tissue culture propagation are:

- It produces mass quantities of plants in a short period of time, compared to conventional growing techniques such as seeds, offsets and cuttings, and allows growers to determine quantities and varieties of the plants they want to grow.
- The new plants are almost always true-to-type and have the same traits as the parent plant, such as attractive foliage or flowers, size, and disease resistance. (Having said that, there are some caveats: 1) new plants will also inherit a parent's undesirable traits and, 2) mutations, i.e., genetic variation, can occur in the tissue culture process, but these are typically modest and manageable.)
- It uses near-ideal growing conditions (light, temperature, humidity, and nutrient-rich culture media) that result in hardy, healthy plants.
- The sterile growing conditions can result in disease-free plants and reduce the likelihood of transmitting diseases and pests during handling and transport.

A simplified description of the tissue culture process preferred by most growers in the industry is as follows:

- The process starts with removal of appropriate tissue ('explant') from the mother plant. While the 'explant' can be from any part of the mother, it generally comes from lateral buds (auxiliary bud tips).
- After the explant/tissue is removed from the parent, it is sterilized and placed on a solid culture medium or into a liquid medium. These media may be augmented with dilute concentrations of plant hormones, nutrients, and/or nitrogen.
- The tissue cultures are transferred into flasks with the transfer process taking place inside a laminar flow cabinet (a tissue culture hood) to reduce the likelihood of contamination.
- The flasks are then placed into lighted trays/shelves in a sterile, temperature-controlled room. A shaker table or a rotary agitator is used to prevent the undifferentiated tissue cells from developing into roots and leaves.
- Shoots that emerge from the tissue culture are sliced off and placed in another medium where they develop into plantlets with roots.
- When the plantlets are large enough, they are transferred to sterile potting media, and placed in multi-unit trays in a humidity- and temperature-controlled environment where they are hardened off in preparation for further growth outside the controlled environment, into mature plants.

Pictured below are three *Guzmania* Tom showed with his talk that were produced by tissue culture. The *Guz. squarrosa* hybrid (the red/yellow one on the left) and *Guz. 'Viola'* (the purple one on the right) are both genetically identical to their respective parents. The white one, *Guz. 'Snowball'*, is a mutation of its purple mother plant.



2012 Dues

Treasurer Brian Corey reminded members their dues are payable through February. You may pay dues at the February meeting, or send a check, payable to FWCBS, to Brian at 1153 Williams Drive South, St. Petersburg FL 33705. Dues will be considered delinquent if not paid by March 1st.

Show and Tell

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|---------------|---|
| Marty Baxley | <i>Bil. 'Chet'</i> (unregistered hybrid); <i>Bil. 'Hallelujah'</i> x <i>stonlonifera</i> ; <i>Bil. stolonifera</i> x 'Hallelujah'; <i>Aec. recurvata</i> (red) x <i>A. nallyi</i> (white flowers); <i>Neo. 'Shocking Pink'</i> (unregistered hybrid; mutated clone; pictured below) |
| J.C. Campbell | <i>Pitcairnia rubronigriflora</i> x <i>P. smithiorum</i> |
| Tom Crocker | Three <i>Guzmania</i> produced from tissue culture |
| Dave Johnston | <i>Tillandsia</i> , species unknown |
| Alton Lee | <i>Bil. 'Beryl Allen'</i> |
| Helga Tarver | <i>Til. ionantha</i> var. <i>ionantha</i> ; <i>Til. ionantha</i> var. <i>vanhyningii</i> ; <i>Til. ionantha</i> 'Fuego'; <i>Til. ionantha</i> var. <i>stricta forma fastigiata</i> ; <i>Til. bulbosa</i> |

Below are pictures of some of the plant shown.



Til. ionantha 'Fuego'



Til. ionantha var *ionantha*



Neo. 'Shocking Pink' clone showing genetic variation compared to parent plant



Pitcairnia rubronigriflora x *P. smithiorum*



Bil. 'Hallelujah' x 'Stolonifera'



Bil. 'Stolonifera' x 'Hallelujah'

THIS AND THAT

New Members

We had five people become new members at the January meeting: Susan Habert, Clare Johns, Bob and Carol Smith, and Caterina Stillwagon. Please welcome them

Addenda

The January newsletter did not include the names of members who donated plants for the Special Raffle at our marvelous December Holiday Party. Those plants were donated by Dennis and Linda Cathcart, Michael Kiehl, and Linda Sheetz. In addition, Steve Littlefield donated copies of the poster he designed and drew for the 1996 World Bromeliad Conference, *Orlandiana*. We thank these folks and the many others who were generous with their donations.

Recuperating Member

Helga Tarver has report that Wilma Murphy is recovering from injuries she sustained after a fall a few months ago. Wilma is now back at home and you can reach her there with your good wishes for a speedy recovery.

World Bromeliad Conference, Orlandiana '12

The 20th international World Bromeliad Conference will be in our own backyard this September 24 through 30, in Orlando, Florida, at the Caribe Royal Hotel. Held every two years, it is an event not to be missed. It is packed with all manner of activities including:

- A judged bromeliad show
- Seminars by nine internationally known speakers
- A poster session
- Bus tours to both commercial growers' nurseries and private home gardens
- Daily raffles and silent auction
- A rare plant auction (always a lively event)
- A banquet
- Bromeliads sales

People are encouraged to register soon, for both the conference and a hotel room. If you need to cancel your conference registration, the fee is 100% refundable if requested by February 28, and is 70% refundable if requested by August 24. After that, there will be no refund except in extraordinary circumstances. For more information, go to the website bsi.org/events/2012/Orlando2012.

UPCOMING EVENTS, 2012

March 24-25, GreenFest Plant Sale

University of Tampa, Tampa, FL (tampagreenfest.com)

April 6-8, Tropiflora Spring Festival

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

April 14-15, USF Botanical Gardens Spring Plant Sale

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

April 28-29, Green Thumb Festival

Walter Fuller Park, St. Petersburg, FL

September 24-30, 20th World Bromeliad Conference, Orlandiana '12

Orlando, FL, USA (bsi.org/events/2012/Orlando2012)

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