S.F.V.B.S.

SAN FERNANDO VALLEY BROMELIAD SOCIETY

SEPTEMBER 2019

P.O. BOX 16561, ENCINO, CA 91416-6561
sfvbromeliad.homestead.com sanfernandovalleybs@groups.facebook.com
Twitter is: sfvbromsociety ***Instagram is: sfvbromeliadsociety***

Elected OFFICERS & Volunteers

Pres: **Bryan Chan** V.P.: **Joyce Schumann** Sec: **Leni Koska** Treas: **Mary Chan** Membership: **Steffanie Delgado**
Advisors/Directors: **Steve Ball, Richard Kaz –fp, & Carole Scott-fp,** Sunshine Chair: **Georgia Roiz** Refreshments: **vacant**
Web & Editor: **Mike Wisnev** Snail Mail: **Nancy P-Hapke** Instagram & Twitter & Face Book: **Felipe Delgado**

next meeting: Saturday September 7, 2019 @ 10:00 am

Sepulveda Garden Center 16633 Magnolia Blvd. Encino, California 91436

AGENDA

9:30 – ***SET UP & SOCIALIZE***
10:00 - *Door Prize drawing – one member who arrives before 10:00 gets a Bromeliad*

10:05 -Welcome Visitors and New Members. Make announcements and Introduce Speaker

10:15 –*Program* – BSI program featuring ***Billbergias***
We always enjoy our monthly speaker programs featuring our favorite plants located near and far in exotic lands. We also enjoy our occasional workshops and hands-on activities. As program chair, I have always thought focusing on a specific genus would also be interesting and enjoyable.

A few weeks ago, it was brought to my attention that the Bromeliad Society International has a BSI Media Program available for affiliate use that is exactly what I had been looking for. (Thanks to Mike Wisnev for forwarding the information to me.) They have seven or eight programs available and I have selected one for our September program.

Our topic this month will be the genus *Billbergia*. Our commentator will be our own Bryan Chan. He will navigate the power point program which includes some narrative and provide additional commentary. This is a wonderful opportunity to immerse ourselves in the study of one genus, to compare and contrast the various species, review cultivation needs and to add our own two cents worth of commentary.

11:15 - Refreshment Break and Show and Tell: Will the following members please provide refreshments this month: **P Q R S T U and V *and anyone else who has a snack they would like to share.*** If you can't contribute this month don't stay away…. just bring a snack next time you come.

Feed The Kitty
If you don't contribute to the refreshment table, please make a small donation to **(feed the kitty jar)** on the table; this helps fund the coffee breaks.

11:30 - Show and Tell *is our educational part of the meeting* – Members are encouraged to please bring one or more plants. You may not have a pristine plant but you certainly have one that needs a name or is sick and you have a question.
11:45 – Mini Auction: members can donate plants for auction, or can get 75% of proceeds, with the remainder to the Club
12:00 – Raffle: Please bring plants to donate and/or buy tickets. Almost everyone comes home with new treasures!
12:15 - Pick Up around your area
12:30 –/ **Meeting is over**—Drive safely <>

LA Cactus club Fall Sale
Sat. Sept. 14, 2019 9 – 4pm
Sepulveda Garden Center
Plants, pottery, rocks and more
Details: www.lacactus.com

Announcements

- ***SFVBS Participation Rewards System*** **–** This is a reminder that you will be rewarded for participation. Bring a Show-N- Tell plant, raffle plants, and Refreshments and you will be rewarded with a Raffle ticket for each category. Each member, please bring one plant
-

Fun PICNIC Food

Bryan and Mary Chan will host our annual Potluck Picnic again this year. The Club will provide the main dish. Members will provide the side dishes. In addition to eating and visiting, we will hold our raffle and Show & Tell events.

Date: Saturday, October 5, 2019

Time: Doors open at 11:00 AM. We eat at Noon. Hangout from 1:00 PM till ??

Please RSVP via email to Bryan to let him know that you will be attending, the side dish you will be bringing and directions to his home. bcbrome@aol.com

September Library Notes *from Joyce Schumann*

On a rare day in July, I found myself wandering through a book store looking for nothing in particular. After checking up on my favorite mystery authors, drooling over the travel section, fantasizing through the science fiction and then still having time on my hands, I headed toward the gardening section. Hmmmm - got that. Don't need that. Don't know what that is. Too expensive…. What's this??? Something new??? YES!!! At least new to me. A charming, unpretentious, slim volume about Tillandsias titled "Living with Air Plants – A Beginner's guide to Growing and Displaying Tillandsia" by Yoshiharu Kashima. Part 1 is titled "Cultivating Air Plants" which covers preferred environment, growth cycles, tools, materials, and maintenance of air plants. Part 2 is titled "The Fun of Displaying your Air Plants." This section is full of ideas for displaying your plants. Each display contains helpful information on materials, equipment, method, and plants used in each display. Part 3 is titled "Air Plant Reference Guide." This is a very easy plant identification section that is divided into two sections. Section one describes 48 Beginner Plants with excellent photos. Section two consists of 70 Specialty Varieties plus more excellent photos. Each descriptive paragraph includes information on availability, plant size, and sunlight requirements. I thought the Index, on pages 94 and 95 to be most helpful in locating a plant of interest. If you have any interest in displaying your Tillandsias in or on something other than a coat hanger, this is an excellent resource for you! The Final 12 of our "old" BSI Journals will be added to our Library this month. One issue is dated Nov.-Dec. 2005, five issues from 2006 and six issues from 2007. There are lots of articles, photos and a few walks down memory lane to be enjoyed in each issue.

Lots of good information, hints, identification, etc. can be found in our Library books. Make sure you stop by and CHECK IT OUT!!!!!!

Please pay your 2019 Membership Dues

NEED TO RENEW ?.....

Pay at the meeting to: Membership Chair –Steffanie Delgado or Treasurer - Mary Chan
or Mail to: SFVBS membership, P.O. Box 16561 - Encino, CA 91416-6561
Yearly Membership **Dues - $10 for monthly e-mail** newsletters or **$15 for snail mail**

Please Put These Dates on Your Calendar

Here is our 2018 Calendar. Rarely does our schedule change……. however, please review our website and email notices before making your plans for these dates. Your attendance is important to us

Saturday September 7	*Billbergia* Program
Saturday October 5	Picnic at Chans, at 11am
Saturday November 2	STBA
Saturday December 7	Holiday Party

STBA = Speaker To Be Announced

Speakers Let us know if you have any ideas for Speakers about Bromeliads or any similar topics? We are always looking for an interesting speaker. If you hear of someone, please notify **Joyce Schumann at** 818-416-5585 **or** ropojo@pacbell.net

This section is open for any Member-contributions of photos or articles….

Photos from SBBA 2019 Show

Pitcairnia heterophylla
Photo by Wisnev

Billbergia 'Caramba'
Photo by Steve Ball

Submitted by Mike Wisnev - It is always great to visit the South Bay Bromeliad Club Show and Sale at the Rainforest Flora. One of the most unusual bromeliads there was on the show table – *Pitcairnia heterophylla*. The original description by Lindley in 1840 says it is named "for bearing two kinds of leaves. Those at the base of the plant arise from tough; concave, broad, horny petioles, which overlie each other, forming a kind of bulb, and are extended into narrow, hard, serrated, spiny, brown processes about two inches long. The leaves, on the other hand, which are last formed, are thin, lanceolate, bright green, and more than eighteen inches long when full grown, and bear no resemblance to the first." Bot. Reg. 26: pl. 71. 1840. But I never even paid attention to them – the inflorescence was too stunning!

Photo by Wisnev.

Taxonomic Tidbits: *Got Vivipara?*

By Mike Wisnev, SFVBS Editor (mwisnev@gmail.com)

San Fernando Valley Bromeliad Society Newsletter –September 2019

I thought the answer for most club member (including me) was yes, though it might be awhile before you see it yourselves. But now I am not so sure. Read more to learn why.

Some of you probably already know which bromeliads will be discussed by the title. There are fairly few viviparous bromeliads, and two of them are *Tillandsia secunda and somnians*. There are a handful of others, including the pineapple.

Unlike animals, many plants can reproduce by both sexual and asexual means. There are various ways to reproduce asexually – most bromeliads do so through the production of offsets at the base of the plant. Even if your bromeliad wasn't potted, most would have offsets tightly surrounding the base.

In contrast, a few bromeliads produce offsets on the inflorescence itself. According to the Glossary of Botanical Terms with special reference to Succulent Terms by Urs Eggli, vivipary is "seeds germinating within the fruit while this is still attached to the plant; sometimes also used for plants producing bulbils in the inflorescence." To be honest, I didn't really focus on the difference when I wrote the article. From what I can gather, the former is true vivipary, while plants that form vegetative offsets in the inflorescence (but not from seed) are considered pseudoviviparous.

Sometimes the fruit remains on the inflorescence and the seed actually germinates, like pineapple. In others, the plant produces asexually and forms offsets, sometimes referred to as bulbils (at least in succulents) in the axis of the inflorescence (sometimes seen in *Agave* and *Gasteria*.). Interestingly, I hadn't heard the term "viviparous" in the succulent hobby, and don't hear bulbils in the bromeliad hobby.

To be honest, I am not sure which is the case for the two Tillandsia discussed in this article - ***T somnians and secunda***.

The process can take quite a while to finish. I got *T somnians* at a club meeting in March 2012. Below is the inflorescence with 2 pups – I think I got a larger one not shown here. The ones lowest on the inflorescence develop first, and are the largest.

In their habitat, in moist conditions in Peru, these plants grow in trees and the inflorescence climbs up the tree and branches and eventually the pups themselves to other branches.

So I put mine in a tree – below you can see the inflorescence climbing upward. In December of that year, it had put out a ridiculously long inflorescence –it is circled in red. The plant at top right, with nasty spines, is *Aechmea* 'Hacienda' – recall that *Tillandsia* don't have spines on the leaf margins.

The variegated one at bottom left is *Neo* 'Johannes de Rolf'.

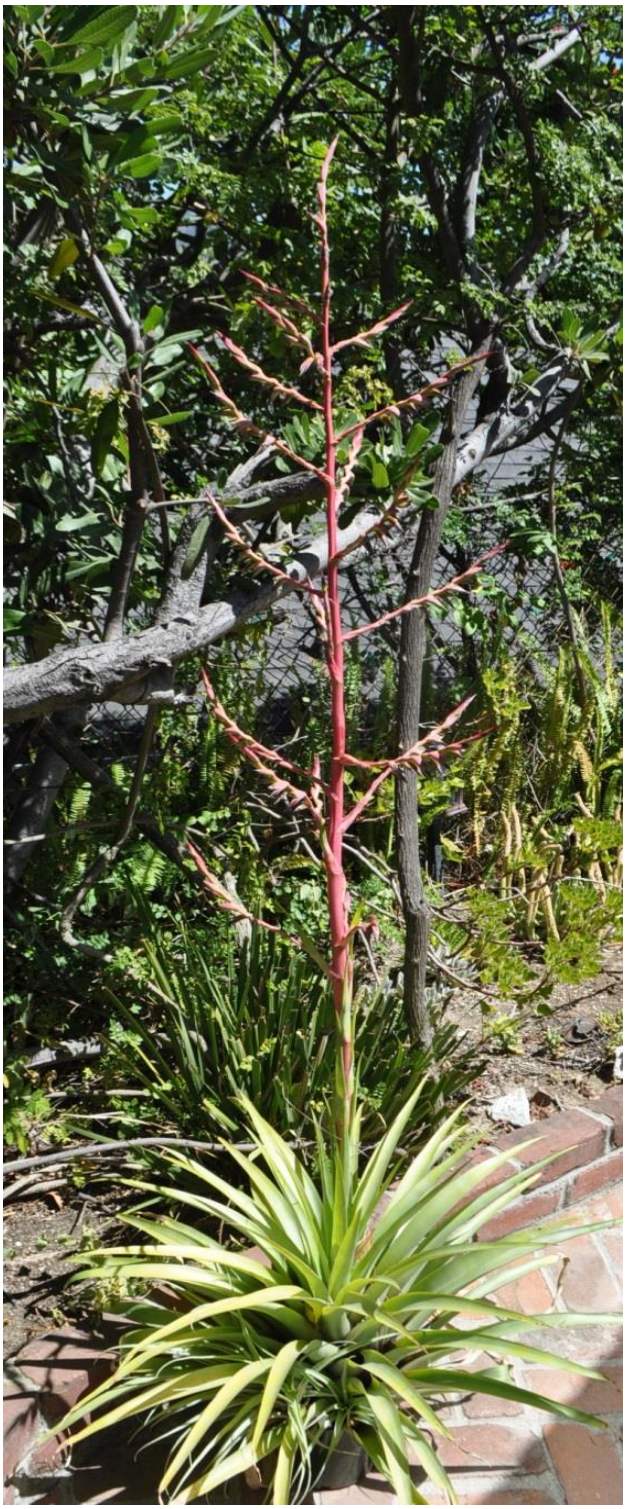
By April 2013, most of the inflorescence had developed, but I had yet to see a flower. Finally, the next month, a flower. Not the most impressive one around, but quite an inflorescence overall. At this point, I was still pretty new to the hobby –I recall waiting for all the flowers to open up at once. If you are new, note I am still waiting – they don't.

They open from the bottom to the top over time, maximizing the time they can be pollinated.

After that, the pups start growing pretty quickly.
Here is the mama plant and the lowest offset in August 2013.

Tillandsia secunda

is perhaps even more amazing. Unlike most *Tillandsia* which are epiphytic, *T secunda* grows in Ecuador either in the ground (terrestial) or on rocks (saxicolous). Let's watch what happens. Here it is on June 29, 2012 – shortly after I noticed the inflorescence was developing. You can see the plant also has a few basal offsets, as many bromeliads do.



I had read about this process, but had no idea how long it would take. I watched it a lot, and it is slow. Here it is September 2, with the inflorescence almost fully developed although there are still no flowers. It is roughly five feet tall. Finally on September 14, it had some flowers. They are pretty typical looking although larger than most – probably about 2 inches long. Note the long exserted stamens

It was good that I knew the plant was viviparous- otherwise I might have cut off the inflorescence when the flowers were done. Again I was eager to see what would happen. So I waited, and waited, and ….

finally, in early February bulbils were forming. Above are some on Feb 9, 2013 – about 9 months after the plant started its inflorescence.

Well, more started to form and all got bigger. A few fell off when the plant tipped over since it got so heavy. Here it is in late June after about ten have already been taken off. The offsets are much more xeric looking than the mother

plant, and some even have a redish tint to them from the sun.

The mother is not looking so happy now. Producing a large inflorescence and so many pups exacts a huge toll on the plant's recources .

The mother plant will die after producing all the pups. Most bromeliads are monocarpic, though it may take some time for the mother plant to die. Fortunately, most Tillandsias produce offsets of one kind or another after they flower, and the mother plant's reserves are used to produce offsets. This process is very gradual, so you may not notice it. By the time the mother is dead, the pups may be so large you don't even realize the mother is gone. It is much more obvious for tank-top bromeliads. A few don't produce offsets, however, so you will lose the entire plant.

This is what happens with *Agaves* – they are all monocarpic. Some produce bulbils, but not all that many So while typically hobbyists can't wait to see the flowers, it is always sad to see the inflorescence develop on an *Agave* since the plant will die, and often without pups. It doesn't help that *Agav*e flowers aren't particularly attractive.

T secunda is unique in another respect. Many subgenera of *Tillandsia* differ primarily based on relative length of their stamens. Both *T secunda* and *T somnians* are in subgenus *Allardtia* – its members have stamens a bit shorter than the petals. I started doing this article shortly after my *T secunda* bloomed, and was sure it had exserted stamens. Since I had taken a photo, I checked and sure enough, the stamens were seriously exserted. In contrast, I knew my *T somnians* has included stamens – I needed a stepladder to take the second picture in this article since I never saw the stamens when looking up from the ground. See the flower pictures above.

This was a bit of a shock – had I found an error in Smith and Downs? While undoubtedly a treatise 2200 pages long will have some errors, this seemed hard to believe for such a common species. Maybe mine was a hybrid? But I looked at pictures I found and it seemed right – for that matter, the pictures on FCBS showed exserted stamens also.

Finally I went back to Smith and Downs. At the end of the description of *T secunda*, they said A. J. Gilmartin (a Washington State botany professor who studied and wrote about bromeliads extensively) had reported that *T secunda* is heterostylous – one type has exserted stamens and included styles, and the other has the reverse. (Mine has both exserted.) For that reason, Gilmartin considered it as a member of subgenus *Tillandsia* (with exserted stamens), while S&D placed it in *Allardtia*. In any case, they were not aware of other cases of heterostyly for the family. That is about as unique as you can get.

Other *Tillandsia* that are viviparous include the well known *T latifolia* and not so well known *T flexuosa*.

Are other genera viviparous? It doesn't seem all that common. Some *Orthophytum* are, and I think some *Cryptanthus* as well. Surprisingly, a few months ago, Andy Siekkinen (our speaker) showed us some *Hohenbergia* he found in Chapad Diamantina, Brazil with a pup at the top of the inflorescence – he seemed surprised by this as well. So perhaps it will turn out they are more common than originally thought.

So are these Tillandsia viviparous or pseudoviviparous? Frankly I am still not sure, but think *T secunda and somnians* are pseudoviviparous. So it appears I don't have vivipary! Since the term "vivipary" is often used to include both, it isn't easy to tell in may cases. Benzing reported that *T. flexuousa, paucifolia and utriculata* were viviparous, but he used to the term to mean producing robust inflorescence offshoots. Benzing, D. Vascular Epiphytes: General Biology and Related Biota (p161) 1990. The web lists various others as viviparous, like *T intermedia and T dura.*

However, there are reports of true vivipary for *T. tenuifolia* as far back as 1920 by John Harshberger at U. of Pa. This year there was a scientific article that says vivipary occurs in *T recurvata*. Francisco Javier Pérez-Noyola, Joel Flores, Laura Yáñez-Espinosa, Enrique Jurado, Edilia De La Rosa-Manzano, Ernesto Badano, Complete vivipary behavior detected in the epiphytic *Tillandsia recurvata* L. (Ball moss) in the Chihuahuan Desert in two continuous years, Journal of Arid Environments, 2019.

Overall, a 2007 article said vivipary and pseudovivipary had been document in about 80 vascular plant families, including 143 genera. Cacti have both (including cryptovivipary, which is apparently a "subcategora of true vivipary in which the embryo does not protrude through the ovary wall." J. Hugo Cota-Sánchez, Deusa D. Abreu, Vivipary and offspring survival in the epiphytic cactus *Epiphyllum phyllanthus* (Cactaceae), *Journal of Experimental Botany*, Volume 58, Issue 14, November 2007, Pages 3865–3873, https://doi.org/10.1093/jxb/erm232.

Corrections - Thanks to Eric Gouda who pointed out that the picture captioned *Gregbrownia fulgens* in last month's Taxonomic Tidbits was actually *Racinaea seemannii.* The correct picture is shown to the right. 42 BSJ 22 (1992).

Photo by Werner Rauh.