



S.F.V.B.S. NEWSLETTER

NOVEMBER 2016

SAN FERNANDO VALLEY BROMELIAD SOCIETY

P.O. Box 16561, ENCINO, CA 91416-6561

sfvbromeliad.homestead.com

[sanfernandovalleybs@groups.facebook.com](https://www.facebook.com/sanfernandovalleybs)

Elected OFFICERS & Volunteers

Pres: Mike Wisnev V.P.: John Martinez Secretary: Leni Koska Treasurer: Mary Chan Membership: Joyce Schumann
Advisors/Directors: Steve Ball, Bryan Chan, Richard Kaz –fp, Mary K. Carroll Sunshine Chair: Georgia Roiz,
Refreshments: Gisela Miller, Web: Mike Wisnev, FaceBook: Roger Cohen Editors: Mike Wisnev & Mary K., Snail Mail: Nancy P-Hapke

next meeting: **Sat. Nov 5, 2016 @ 10:00 am**

Sepulveda Garden Center (SGC) 16633 Magnolia Blvd. Encino, California 91316

AGENDA

9:30 – SET UP & SOCIALIZE

10:00 - Door Prize – arrive before 10:00

10:05 - Welcome Visitors

10:15 - Introduce *Speaker*: Wendell Minnich

***Program features* BRAZIL**

It seems like we have a program on Brazil about once a year, but what makes it interesting is that they are all very different. It is a very interesting place to visit. The pictorial presentations are captured through different camera lens and a different pair of eyes.

Brazil is the only Latin American nation that derives its language and culture from Portugal. The native inhabitants mostly consisted of the nomadic Tupí-Guaraní Indians. The territory was claimed for Portugal in 1500. The early explorers brought back a wood that produced a red dye, *pau-brasil*, from which the land received its name. Portugal began colonization in 1532 and made the area a royal colony in 1549. The capital is Brasília, with a population of 2,160,100.



Woody, as he is commonly called, is a retired high school teacher of 32 years where he taught Graphic Arts, Architecture, Art and Health. Woody and his wife currently live near Santa Fe, New Mexico, where he owns the

Cactus Data Plants Nursery specializing in Cactus and Succulents.

He is well known in the plant hobby for his many presentations. His photography is considered to be special and his commentary very entertaining and educational. He is a recognized international speaker and has spoken for plant conventions - organizations all over the USA, as well as in England, Germany, Australia, New Zealand and Mexico.

Woody is also known for his extensive field work studying primarily the cactus family and now he is learning about Bromeliads. He has traveled throughout Bolivia, Brazil, Chile, Mexico and Peru while on these trips he has photographed many Bromeliads in habitat and is enjoying learning about them from our members. <>

1:15 - Refreshment Break - Will the following members please provide refreshments this month: **Nancy Pyne-Hapke, Adrienne Jaffe, James Johnson, Brenda Kanno, Richard Kaz, Leni Koska 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 - For Show and Tell: please bring a plant

11:45 – Mini Auction: members contribute

12:00 – Raffle: We need each member to donate

12:15 - Pick Up around your area

12:30 – Meeting is over—Drive Safely <>

Mary K is taking a look back at last month..... *Guillermo Rivera* was our speaker; he always gives us a great program. Since Guillermo is only in California about once a year, I wanted as many people as possible to enjoy his presentation on ECUADOR's Bromeliad Paradise. I sent out e-mail announcements of his talk to the LaBallona Club and LACSS and as a result we had several visitors. *Joyce* is doing a great job with membership. Please welcome *Peter Speziale*, who became our newest member. *Gregg DeChirico* has relocated to Homestead Florida. On his way out of town he treated our club to a huge going out of business sale, with many Tillandsias. This time the early birds did get the best worms. *Gregg* also donated a couple of nice plants to our mini-auction. Adrienne, Holiday food coordinator, started her list of pot luck dishes. Call Adrienne at **818-833-9757** or MaryK at 818-705-4728 or rango676@aol.com to list your pot luck donation. Thanks for the Show-N-Tell participation by *Leni, Nancy, Carole, Nels, Bob Wright, Tom Lucero, Peter, Steve* and *MaryK*. As usual we had lots of great food for the lunch. *Gisela* has done a great job taking over refreshments, which reminds me that she only agreed to do the job until the end of this year; we will be looking for another volunteer. Other refreshments contributed by *Joyce, Nancy, and MaryK*. Thanks to the 29 members in attendance; your participation is necessary for our club to thrive.

Announcements

SPECIAL

SPECIAL

SPECIAL

The SFVBS is pleased to offer a special show of appreciation for all members who renew their membership before or at our Annual Holiday Party on Sat., Dec 3, 2016.

All early renewals will be entered in a special drawing at the Party for a special Bromeliad.

You must be present to win

DID I SAY THIS IS SPECIAL?

- ***Spring Forward / Fall Back – Time change Sunday November 6***
- ***No November Birthdays***
Give your DOB to Joyce or Mary K so we can send good thoughts your way on your day.
- ***Plant Sale*** - Desert Creations, home of rare and unusual Cactus and Succulents is having a **Holiday Gift Shop Sale** on November 19th. Desert Creation Nursery and Gift Shop at 18161 Parthenia (east of Lindley), Northridge 91325.
- ***Holiday Party on Saturday December 3*** – **Adrienne Jaffe is the food coordinator. She will have a sign-up sheet at the meeting.** The main thing the coordinator does is to make suggestions and keep track of who is bringing what pot luck dish so that we don't end up with a dozen cakes and cream pies. **Bryan said he will cook the turkey; he does a good job. Start thinking about what pot luck dish you plan to bring. Bryan will order holiday plants for current members and we always have a gift exchange.**
- ***Attendance Book*** – Two good reasons to sign in.... 1. Attendance is very important for a small club like ours to remain viable. 2. That's how you are noted for Participation Rewards.
- ***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 John Martinez johnwm6425@gmail.com
- ***SFVBS Facebook and Web site*** – Mike puts all newsletters on the Web. See info at top of the newsletter bromeliad articles written by Mike, our president. The newsletter by snail mail is only a few pages and we can't print the full color articles. If you don't have email, ask your neighbor, friend or family member if once a month you can use their address to receive the newsletter or go online to check our webpage. sfvbromeliad.homestead.com

Anyone have *Wallisia cyanea*? *Lutheria splendens*?

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

San Fernando Valley Bromeliad Society Newsletter –November 2016

Back in January 2014, this Newsletter finished a series of three articles about *Tillandsia* subgenera and concluded that

“At the outset of these articles, I mentioned that the *Tillandsia* subgenera will likely be revised in the near future. Walter Till, who has also studied cacti (and in particular *Gymnocalycium*), is working on these changes. He and three other botanists at the University of Vienna did an earlier study in 2005 that suggested the current subgenera might not be valid, but the authors felt more intensive study was needed. Barfuss, M.H.J., Samuel, R., Till, W., Stuessy, T.F., 2005. Phylogenetic relationships in subfamily Tillandsioideae (Bromeliaceae) based on DNA sequence data from seven plastid regions. *Am. J. Bot.* 92, 337–351. The 2005 study more or less found these six subgenera were a mess from a DNA standpoint. These studies essentially analyze some of the DNA of the species and then prepare a tree-like diagram based on the way the species group together based on the DNA analysis. For the subgenera to be valid from a DNA standpoint, the tree would have six major branches, and each branch would include one subgenera.”

It has taken about a decade, but finally there is some resolution. In a very lengthy article, the genera *Tillandsia* and *Vriesea* have been revised to reflect DNA analysis. Barfuss, M.H.J.; Till, W.; Leme, E.J.C.; Pinzón, J.P.; Manzanares, J.M.; Halbritter, H.; Samuel, R. & Brown, G.K. (2016) Taxonomic revision of Bromeliaceae subfam. Tillandsioideae based on a multi-locus DNA sequence phylogeny and morphology. *Phytotaxa* 279 (1): 001–097.

DNA analysis still leaves room for lumpers and splitters. The authors recognized this, and felt that a splitter’s approach was better since it would have been very difficult to find plant characteristics applicable to the groups if a lumping approach was used. They stated:

“In our opinion, a stable classification of Bromeliaceae subfam. Tillandsioideae has (1) to be based on phylogenetic relationships (i.e., monophyletic units) and (2) should have predictable morphological determinability by synapomorphic combinations of characters, when at least flowering material is available. We therefore evaluated the two most realistic approaches: (1) recognizing three small genera (*Catopsis*, *Glomeropitcairnia*, and a new genus segregated from *Mezobromelia*), one medium size genus (*Guzmania*), and lumping remaining species into two large genera (*Vriesea*, and *Tillandsia*) by sinking four well-established and morphologically mostly well-defined genera into synonymy (into *Tillandsia*: *Racinaea*; into *Vriesea*: *Alcantarea*, *Mezobromelia* s.str., and *Werauhia*); or (2) recognizing the six already widely accepted genera (*Alcantarea*, *Catopsis*, *Glomeropitcairnia*, *Guzmania*, *Racinaea*, and *Werauhia*) and splitting three existing genera (*Mezobromelia*, *Tillandsia*, and *Vriesea*) into smaller groups. The first scenario would primarily create the two morphologically very heterogeneous and ill-defined genera *Vriesea* and *Tillandsia*, both with no predictive value, meaning that synapomorphic combinations of diagnostic morphological characters are absent to define these genera for all species that would have to be included. The second scenario allows the recognition of several smaller genera, which are well circumscribed morphologically and are monophyletic, and an emended narrower circumscription of established genera. We therefore implemented the second splitting approach since also previous investigations have clearly shown that only smaller groups can be morphologically well characterized (e.g., Costa et al. 2014, Grant 1995a, Krömer et al., 2012, Leme 2007, Spencer & Smith, 1993, Versieux & Wanderley 2015).” Id. at 31.

As a result, they created a number of new genera for both *Tillandsia* and *Vriesea*, thought most of each genus remain the same. Some of the new names are below.

Most of us know the well-known *T. cyanea*. It and its relatives, like *T. lindenii*, are now considered *Wallisia cyanea* and *Wallisia lindeniana*. As an aside, the problems with the species names are horrific – the plant we know as *T. cyanea* was actually first called *T. lindenii*, as was *T. lindenii*. To add more confusion, the plant many of us know as *T. lindenii* may actually be a hybrid between *cyanea* and *lindenii*.

One of the most spectacular species is the aptly named *T. grandis*. Now it is called *Pseudalcantarea grandis*. A couple other species are in this genus – *P. viridiflora* and *P. macropetala*.

Other new genera created from *Tillandsia* are *Lemeltonia*, *Josemania* and *Barfussia*. A bit more on the latter can be found under Member Photos. Many of the new genera are characterized by certain shapes of their stigma or pollen. For example, *Barfussia* have convolute-obconic stigma.

Similar divisions occurred for *Vriesea*. As noted above, *Alcantarea* and *Werauhia* still are good genera. Most *Vriesea* species remain in the genus, but now there are five new genera – *Goudeaea*, *Jagrantia*, *Lutheria*, *Zizkaea*, and *Stigmatodon*, as well as a *Cipuroopsis*-*Mezobromelia* complex. Two of the more well known species are now *Lutheria splendens* and *L. glutinosa*. Another is *Goudeaea ospinae*, which has the unusual matte finished leaves, rather than glossy.

If you haven't seen them, here are some sites with lists of all the species.

1. Accepted Bromeliaceae names: <http://botu07.bio.uu.nl/data/bromNames.php>
2. Bromeliaceae names and synonyms: <http://taxonlist.florapix.nl/>

More to come in future articles.

Member Photos – *Barfussia platyrhachis*



Ana and I saw this incredible plant on a recent visit to the Olbrich Gardens in Madison Wisconsin. Labeled *Tillandsia wagneriana*, it seems more likely to be *T platyrhachis*, or possibly a hybrid. Under the taxonomic news reported elsewhere in this newsletter, both species are now considered to be in the *Barfussia* genus. The leaves are plain green and look much like a *Vriesea*.

Aechmea, its subgenera and history - how does taxonomy work? – Part 4 -

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

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Part 3 discussed some of the *Aechmea* subgenera. This part continues that discussion.

*Platyaechmea*¹. This subgenus is distinguished by its decurrent floral bracts that form pouches around the flowers. The well known *A fasciata* is a member of this group and is pictured in the May 2014 Newsletter. The lovely *A chantinii* is also in this group.

Below is a cultivar named *Black Chantinii*. Unfortunately this species doesn't like cold weather.



Another member of this subgenera is *A dichlamydea* which was pictured earlier.

The current description says its flowers can be distichous or polystichous (like *Ae. fasciata*). In contrast, Baker's description stated they had distichous branches. Thus, this description of the subgenus has been changed over time.

¹Platy means broad in Greek, but I am not sure what this refers to.

The four subgenera covered so far have either rudimentary petal appendages (*Chevalieria*), decurrent floral bracts (*Platyaechmea*) and/or pedicellate flowers (*Podaechmea* and *Lamprococcus*). The remaining four, discussed next, all have sessile flowers, petal appendages, and don't have decurrent floral bracts that form pouches around the flowers.

Ortgiesia. This was discussed earlier – it is noted for its connate sepals. While Baker treated it as a genus, Mez considered it a subgenus a few years later. I doubt anything came to light in that short time- instead just a difference of opinion as to whether it should be a genus or subgenus. Recall also that Baker used the connate sepal key to distinguish a number of genera – Mez may not have felt this feature was that important. I have learned that Mez's system relied quite a bit on pollen morphology, which was quite a shock since his first Monograph was before 1900.

Subgenus *Aechmea*. If not already described, and if the inflorescence is distichous, the plant is in subgenus *Aechmea*. Baker's description was quite different, as he defined the group as having “multifarious branches” with petals much longer than sepals.

Below is *A nallyi* – you can see how each branch forms a flat spike, with each pair of flowers facing away from each other. This is dichotomous, as opposed to the most of pictures above which show a polystichous arrangement where they spiral around the peduncle.

Aechmea
nallyi



To avoid confusion on the terminology, the distichous habit refers to the flowers, not the branches. The picture above shows about 10 different branches that do spiral about the peduncle. But the flowers on each of the branches are opposing each other, which gives the head its flat appearance.



Another member of this subgenus is *A bracteata*, which has a rather different looking inflorescence than any I had seen. The flowers are still dichotomous, but they aren't packed together like that of *A nallyi*. You can also see the mucronate green sepals very clearly on the flower on the upper left with the yellow petals.

Macrochordian. This subgenus includes those *Aechmeas* whose sepals are unarmed, and the inflorescence is dense and simple. The name is derived from the Greek words for long rope, perhaps referring to the inflorescence. Baker's description is rather different – he says this group has densely spicate inflorescences “imbedded in tomentum.” This more or less means they are covered in wool, as you will see in the next couple pictures.



The type plant is *A bromeliifolia*, shown above, which was first described as a *Billbergia*. It has an enormous geographical range, extending from much of Central America into western South America and Brazil. The normal form has red bracts, and is shown at the bottom right of the picture (it also has reddish tinged leaves and is sometimes called *bromeliifolia rubra* for that reason, although that is not an accepted name). The larger plant on the left is *A bromeliifolia albobracteata*, which is named for its white bracts. I thought this plant could take a lot of sun, but it didn't and the leaves bleached out. A very similar looking plant, *A maculata*, is shown in the June 2014 tidbits article.



Another similar plant is *Ae. triangularis*, though it has light violet petals rather than yellow ones. The very lepidote sepals don't have a mucronate tip, that is, they don't have a little spine at the tip.

Pothuava. This subgenus includes those *Aechmeas* whose sepals are armed, and the inflorescence is simple. Baker's description is more or less identical. The type plant is *A nudicaulis*, which is very well known, and seems to have been the second *Aechmea* ever described. If you have been to more than two Club meetings you have almost certainly seen it. If you haven't, it is pictured in the June 2014 tidbits article.

It looks like the only difference from *Macrochordian* is that the sepals are armed. You might ask if this really warrants a different subgenus? There isn't an easy answer. Remember first this is only a key, so the description of the subgenera may well contain more differences. But even if this is the only one, botanists might disagree on the importance of this feature.

Below is *A pineliana minuta*, with rather incredibly tipped floral bracts. Its sepals are also spiked otherwise it looks much like the inflorescences of *A bromeliifolia* and *triangularis*, shown above, in the *Macrochordian* subgenus. Actually, this species was first named *Echinostachys pineliana*. The name means spiny spike in Greek, and this genus was later merged into *Aechmea*.



We have now covered all eight subgenera. But there is more to key, including more hints that things are not as easy as one had hoped.

***Lamprococcus* again.** This subgenus, which was in the key as having a simple inflorescence and pedicellate flowers, shows up a second time. It can also have sessile flowers, and most of these have compound inflorescences. The key leads to *Lamprococcus* a second time if the sepals are unarmed, like *Macrochordion*, and the inflorescence is lax and mostly compound.

Based on the description of *Lamprococcus*, it looks like their distinguishing features are unarmed sepals, and a lax glabrous inflorescence. The flowers can be pedicellate or sessile, and the inflorescence can be simple or compound. So now you have an answer as to why *A fulgens* was pictured before – it shows up in a different part of the key. But it does have unarmed sepals and a lax glabrous inflorescence, just like *A racinae* also shown earlier.

Below is another plant shown in Smith & Down's key for *Lamprococcus*. It again fits well with a glabrous lax inflorescence.



But it is not an *Aechmea*! The inflorescence is that of ***Quesnelia marmorata***, and the leaves are a *Vriesea*.

On the next page Smith's keys for *Aechmea* also show "simulators" – species in other genera that seem to fall within the *Aechmea* subgenera. So what makes it a *Quesnelia* – Smith's key to the genera says this has distichous leaves with spots and obtuse ovules, while subgenus *Lamprococcus* has polystichous or concolorous leaves with a long caudate ovule. The keys also distinguishes other *Quesnelia* from *Macrochordion* based on the ovules. This is just one more hint that the subgenera might be artificial. It also shows why it can be exceedingly hard to determine the genus of some plants without dissecting them.

Subgenus *Aechmea* again. This subgenus also shows up twice in the key. The first applies if the flowers are arranged in a distichous manner. The second applies if the sepals are armed, like *Pothuava*, and the inflorescence is compound. The type plant is *A paniculata*, also the type for the entire genus, and shown at the beginning of this article.

A lingulata, also one of the first described *Aechmeas*, and pictured at the beginning, is currently treated as belonging in this subgenus. But it has been considered very differently in the past. For example, it was also considered to be a *Billbergia*, *Hohenbergia* and *Chevalliera*. It was also considered part of a new genus, *Wittmackia*, created by Mez. Finally, and perhaps most bizarrely, Beer in his 1856 monograph treated it both as *Lamprococcus ramosus* and *Hoplophytum lingulatum*. I don't know why. One possibility is that he compiled other descriptions of plants and didn't realize that both referred to the same plant – this has happened before.

Rather than summarize the key characteristics of the eight subgenera, here is the key from Smith and Downs – with some colors and highlights I have added to hopefully make it a bit easier.

Key to Subgenera of *Aechmea*

1. Petal-**appendages well developed**; inflorescence compound or simple, never perennial; flowers often distichous, rarely in prominently bracteate strobils.
2. **Flowers pedicellate**, polystichous.
3. Inflorescence **amply compound, lepidote**, lax; sepals mucronate or obtuse. Mexico, Central America, Peru. subgen 1. *Podaechmea*
3. Inflorescence **glabrous, simple**. Sepals unarmed. South America. subgen 2. *Lamprococcus*
2. Flowers **sessile or subsessile**.
4. Floral **bracts decurrent and forming pouches** around the flowers; flowers distichous or polystichous. North and South America. subgen 5. *Platyaechmea*
4. Floral **bracts not decurrent and not forming pouches**.
5. Flowers **distichous**, spicate. North and South America. subgen 3. *Aechmea*
5. Flowers **polystichous** or fasciculate with no obvious ranking.
6. Sepals unarmed.
7. Inflorescence **lax, mostly compound**. Brazil. subgen 2. *Lamprococcus*
7. Inflorescence **dense, simple**. Brazil (*Ae. bromeliifolia* to Central America and Argentina). subgen 7. *Macrochordion*
6. Sepals mucronate or mucronulate.
8. **Sepals nearly or quite free**. North and South America.
9. Inflorescence **compound**. subgen 3. *Aechmea*
9. Inflorescence **simple**. subgen 6. *Pothuava*
8. **Sepals connate for one-third** to one-half their length, their mucros about as long as their free lobes. Brazil. (*Ae. recurvata* in Uruguay, Paraguay, and Argentina also). subgen 4. *Ortgiesia*
1. **Petal-appendages rudimentary or reduced; inflorescence simple** or rarely digitate, perennial; flowers strobilate, in many ranks; floral bracts conspicuous, mostly thick and ligneous. North and South America. subgen 8. *Chevaliera*