



S.F.V.B.S. NEWSLETTER OCTOBER 2016

SAN FERNANDO VALLEY BROMELIAD SOCIETY

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

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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. Oct 1, 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*: Guillermo Rivera

***Program*: ECUADOR: "Bromeliads Paradise"**

If there is one country on earth that would offer such a variety of habitats is Ecuador: desert, coast, Andes, Amazon Forest, Pacific Forest. It is not surprising that such a small country boast the second largest of bird species in the world (second to Colombia). Well, it is not surprising either that the country also offers a cornucopia of bromeliads from all different habitats: Tillandsia Vriesea, Griggea, Pitcairnia, Puya, Guzmania, are among some of them with many species to see and discover. The presentation will cover the whole country with its incredible habitats (from 5 separate trips).

On each occasion when Guillermo has spoken to our group, we have had a good turn out with positive feedback. His program presentations on different countries are always great. Several of our members have gone on his tours. Don't miss this program.

Guillermo was born in Argentina; now he and his family reside in Florida. He is a former researcher at the University of Cordoba, Argentina. BS degree in Biology University of Cordoba, MS Marine Biology. Northeastern University. PhD in Botany University of Cordoba.

Owner of **Southern Cross Nature Tours** (former South America Nature Tours), a company dedicated to

the organization of botanical and nature tours for the last 15 years, throughout mainly South America (Chile, Argentina, Brazil, Peru, Colombia, Bolivia, Ecuador), Mexico and also South Africa, Madagascar, and Namibia, with emphasis on succulent plants (cacti, mesembs, aloes, etc.), bromeliads, and orchids. Every year arranged tours are presented and organized for botanical hobbyists to participate, and enjoy as well different cultures in different countries where the plants that we enjoy grow.

For information on future trips, please join Facebook Group:

“CACTUS AND SUCCULENT FIELD TOURS” <>
<https://www.facebook.com/groups/1066757093389430/>

11:15 - Refreshment Break - Will the following members please provide refreshments this month: Pat Colville, Gregg DeChirico, Mohamed El-Twansy, Larry Farley, Bob Friedman 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 to 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 <>

Announcements

- **Happy Birthday:** *Dave Bassani Oct. 16, Nancy Pyne-Hapke Oct. 27 and Larry Farley*
Give your DOB to Joyce or Mary K so we can send good thoughts your way on your day.
- **Mosquitoes** – At 80 degrees water becomes stagnant in about 4 days. Stagnant water means Mosquitos breeding. They live in the same tropical environments as the outdoor growth of bromeliads and die when temperatures drop below 50. Flush bromeliads or add fresh water every 3 or 4 days. Mosquito Dunk and Mosquito Bits can be purchased at Home Depot. The dunk is a solid product which can be broken up to use in the tanks and the Bits are grain like.
- **October Bromeliad Bus Trip** – Contact MaryK at 818-705-4728 for reservation details –
Still a few seats available for \$16.00
- **Plant Sale October 7, 8, 9** - Desert Creations Nursery, home of rare and unusual Cactus and Succulents. Check out the Nursery and Gift Shop at 18161 Parthenia (east of Lindley), Northridge 91325.
- **December Holiday Party – Saturday December 3, 2016** - Members are looking forward to the event. **Adrienne Jaffe has agreed to be the food coordinator. She will have a sign-up sheet at the meeting or you can call her at 818-833-9757.** 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. Donate something you like so you can take home leftovers. Bryan will order holiday plants for current members and we always have a gift exchange. We could decorate the room a few days before, but that can be decided later on.
- **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
- **BSI 2017 Conference in San Diego**- Andy is one of the region directors and he spoke to us about the upcoming international conference. They will be looking for volunteer help and most of all he wanted to encourage participation of our Bromeliad members. <>

SFVBS CALENDAR

Fri – Sun Oct. 7-8-9	Desert Creations Sale
Saturday Nov 5, 2016	Speaker - <i>Woody Minnich "Brazil"</i>
Saturday Dec 3, 2016	<i>Holiday Party 10:00 - 1:00pm</i>
Saturday Jan 7, 2017	Speaker - <i>Ray Vanveen</i>
Saturday Feb 4, 2017	Speaker - <i>Tom Glavich</i>

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 John Martinez johnwm6425@gmail.com

Aechmea, its subgenera and history - how does taxonomy work? – Part 3 -

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

In the 1800s, the genera *Aechmea*, *Chevalieria*, *Pothuava*, *Macrochordion*, *Lamprococcus* and *Ortgiesia* were described. John Baker combined the first five into *Aechmea* in his 1879 Synopsis of *Aechmea* and his 1889 Bromeliad Handbook, and instead treated them as *Aechmea* subgenera. Part 3 continues with the discussion of how these various genera and subgenera are distinguished.

Ortgiesia. While Baker merged the other genera into *Aechmea*, Baker's Handbook kept the genus *Ortgiesia*. Regal described this genus in 1867 and named in honor of the head gardener of the Zurich Botanical Garden. This may prove prescient, since of the 8 current subgenera of *Aechmea*, *Ortgiesia* is the one that seems most likely to be valid based on DNA studies. In Baker's key, it was distinguished, along with six other genera including *Portea*, as having "Sepals united in a distinct tube above the cyathiform apex of the ovary." In contrast, *Aechmeas* have sepals that free, at least above the apex of the ovary. This distinction, hardly obvious to most of us, is still considered important today – though now botanists refer to connate sepals.

The major distinction between these two genera with connate sepals is whether the inflorescence is capitate (*Ortgiesia*) or a central panicle or spike (*Portea*). Capitate refers to having a head.

Baker listed two species as *Ortgiesia* in his Handbook. One was *A legrelleana*, which is now called the fairly well known *Ae. recurvata*, pictured to the right. The capitate inflorescence is easy to see, but the connate sepals are pretty much hidden by the red floral bracts below the purple petals.





The above plant is probably *Ae. gamosepala* var *nivea*. It is in the HBG jungle garden but isn't labelled. For those new members, everything but the green leaves is the inflorescence. The petals are the white tips at the end of the red tube-like structures. What are those – the connate sepals that characterize *Ortgesia*! The very thin long thread like organs on the top right are floral bracts. Taken together, the floral bracts, sepals and petals are flowers, including the pistils and stamens enclosed in the petals and not visible here.

Before continuing, this variety isn't too commonly seen. *A gamosepala* is seen a lot, and looks just like this, except the petals are blue or purple. This white form was found in 1954 and described in 1962. From a taxonomic standpoint, most botanists would not think of this as a new species – the mere difference in flower color usually isn't considered enough to create a different species. Some might not even give it a varietal name. It is a bit of semantics anyway – there is a blue flowered form and a white flowered form, irrespective of the name. (If you paid attention, you might have noted that I just erred in the last sentence – the petals are either blue or white, not the flowers. This error sometimes occurs in real descriptions. Most think of the flower color as the color of the petal, but sometimes the “flower” color given is that of the sepals, which leads to a lot of confusion.)

There is a surprising aspect to this picture of *A gamosepala* on the last page– one that reveals a problem in taxonomy. [It was only by luck that it occurred. I sometimes write the articles first and look for pictures later. I looked at the key for this subgenus to see what pictures I might have to show the sepals, and I added the one above.] Recall that a few paragraphs earlier, I said that Baker distinguished *Ortgesia* from *Portea* by having a capitate head instead of a spike. *A gamosepala* has a spiked inflorescence! So why isn't it a *Portea*? It turns out the answer, at least part of it, had already been written in the very next paragraph.

While Baker's key says *Ortgiesia* has a capitate inflorescence while *Portea* has a spiked one, the short description for the *Ortgiesia* in the key starts out by saying "Capitulum or spike central." I have seen this before – a key breaks out two groups based on a particular feature, but then says one genus can have either feature. Sometimes the genus is listed twice in the key, while in other cases, like here, the genus description is inconsistent with the key itself. This is what makes taxonomy so difficult – the plants don't fit in the neat and tidy categories we try to create for them.

Returning to *A gamosepala*, which has a spike, why isn't it *Portea*? Baker's key says *Portea* have petals much longer than the sepals, while *Ortgesia* have short petals. Hopefully there are other distinctions between these two genera, but that is not the function of a key – the key is designed to make it as easy as possible to tell what your plant is, not to give you all the details.

Another surprise is that Baker had treated *Ortgiesia* as a section of *Aechmea* ten years earlier. Why did he make it a genus later? He doesn't address this point explicitly. Based on his key, I presume that when he did his Handbook and compared *Aechmea* to other genera (like *Portea*), he concluded that connate sepals were a more critical feature than he had realized before.

So, taxonomy takes twists and turns, if not outright reversals – *Ortgiesia* was described as a genus by Regal in 1867. Baker made it a subgenus in 12 years later, but then made it a genus again ten years after that. Mez then made it a subgenus again within a decade!



The first *Ortgiesia* was described in 1867 as *O tillandsioides*, now *Aechmea tillandsioides*. . Botanical Drawings. Image 21.

<http://stars.library.ucf.edu/fosterbotanical/21> It is pictured here in a painting by Mulford Foster, the first major American figure in the bromeliad world. Wikipedia says “he was a man of many talents including naturalist, explorer, writer, photographer, artist, horticulturist and a well-respected landscape architect in Florida.” He described about 200 new bromeliad species.

***Aechmea* subgenera per Baker.** Baker’s Handbook listed 11 different *Aechmea* subgenera; today there eight. Baker named one subgenus *Aechmea*, and named four more after the genera he merged into *Aechmea* As noted above, these are *Chevalieria*, *Pothuava*, *Macrochordion*, and *Lamprococcus*. All five names are still accepted today, even if their demise may occur in the future based on DNA testing. Baker named also named a sixth one accepted today, called *Platyaechmea*.

That leaves five more Baker recognized. Two of them (*Pectinaria* and *Pironneava*) are no longer recognized, although most, if not all, of the species in them are still considered *Aechmeas*. From what I can gather, they didn’t last much longer - I think Mez didn’t recognize them in his work a few years later.

The other three are a real surprise – Baker treated *Hohenbergia*, *Canistrum* and *Androlepsis*, all considered valid genera today, as subgenera of *Aechmea*. Each of these three had been described as its own genus earlier, but Baker felt they belonged in *Aechmea*! Thus, don’t feel too bad if you can’t tell these three apart from *Aechmea* – they were once considered *Aechmeas*, and based on DNA testing some of them might end up back there.

As noted above, Baker named six of the current eight subgenera. A seventh current subgenus is *Ortgiesia*, which Baker treated as its own genus. The last subgenus was named by Mez. Mez also had other genera which have been merged into *Aechmea*. While I can't tell you whether the descriptions of, and species included in, the current subgenera correspond more closely to Baker or Mez, Baker named most of them.

Features originally used to distinguish Aechmeas. As noted above, I don't have the original descriptions of the early genera later merged into *Aechmea*. I assume Baker's descriptions of the subgenera are a lot closer to them than the current descriptions by Smith.

Baker's descriptions were very short, and there was no key. Many of the descriptions overlap to some degree.¹ This may be because the earlier descriptions by different botanists overlapped, but I don't know. For that matter, early descriptions were sometimes woefully inadequate. The original *Aechmea* description didn't mention any species, and another new genus name was published without a description. This might not be surprising. If you only have one Bromeliad, you can only describe it; you can't really say much about its genus without having another one for comparison.

Ignoring the three subgenera that were are now treated as different genera, Baker distinguished the *Aechmea* subgenera as follows. *Macrochordium* had an inflorescence imbedded in tomentum (wool) and sepals without pointed tips. *Chevaliera* had a simple spike in the shape of a cone (strobiliform). Two others also had dense simple spikes, but it wasn't very clear to me how they differed; *Pectinaria* had acuminate floral bracts (and no sepal description), while *Pothuava* had small sepals (and no bract description).

¹I also sometimes wonder if botanists who revise the earlier work of others they are a bit hesitant to get rid of the earlier work entirely. But more than once I have read an explanation of how new information renders old genera invalid, and expect it to be dismissed entirely. Instead, with no real explanation, they preserve it in some fashion, such as keeping it as a subgenus, even though that doesn't make much sense given their earlier comments. Maybe they have a bit of guilt, or maybe they are hedging their bets. Or maybe my guess is completely off base.

The other four had pannicles: (1) *Pironneava* had stobiliform branches, (2) *Platyaechmea* had flat distichous branches, (3) *Lamprococcus* had “bright red axis and branches” with small sepals without pointed tips, and (4) sub genus *Aechmea* had multifarious branches with relatively long petals compared to its mucronate sepals.

Thus, it appears the primary basis used to distinguish these early genera was the shape and nature of the inflorescence. This is hardly surprising – the inflorescence is easy to observe, and they vary considerably among *Aechmea*.

Features currently used in *Aechmea* subgenera classification. The Smith and Down’s Monograph is full of keys – keys for genera, keys for subgenera and keys for species. This is designed to simplify the ability to identify the plant, as opposed to providing a complete description.

The *Aechmea* key generally uses the same features as those used by Baker. As noted above, one critical feature used to distinguish the current subgenera is whether the sepals are connate. This is perhaps the most difficult feature to actually detect. Most of the others are readily visible and include the following

1. Do the petals have petal appendages?
2. Is the flower pedicellate (with a flower stalk or pedicel) or not (sessile)?
3. Is the inflorescence lepidote (covered with scale or hairs) or glabrous (no scales or hairs)?
4. Is the inflorescence simple (no branches) or compound (with branches)?
5. Are the floral bracts decurrent and forming pouches.?
6. Are the flowers arranged in two ranks, like a flat spike (distichous) or did they spiral around the peduncle (polystichous).?
7. Do the sepals have a pointed tip?

The key itself is copied at the end of Part 4, shown next month. Most of these features are pretty to observe if you have an inflorescence, and should allow you to easily place an *Aechmea* in its proper group. If you aren’t familiar with some of these terms, you might find it helpful to read the Tidbits article called “*Aechmeas* and their varied Inflorescences” in May and June 2014. <http://www.sfvbromeliads.com/Newsletter.html>

Some of these features were used by Baker to distinguish subgenera, and some weren't. Actually, Baker didn't have a key for the subgenera, but did have brief descriptions. In some cases, I have trouble telling how Baker distinguished the subgenera he used – the brief descriptions sometimes seem to overlap.²

While the descriptions today may be more accurate or useful, the ones used by Baker are presumably closer to the features used by Beer and Gaudichaud when they first described these groups as genera.

Chevaliera. These articles have addressed petal appendages more than once. Their presence or absence have been used to distinguish genera in a number of cases, such as *Vriesea* and *Tillandsia*, and their importance has greatly diminished.

While seven of the subgenera have petal appendages, *Chevalieria* have “rudimentary or reduced” appendages. They also usually have simple stobiliform (cone like) head, as well as conspicuous floral bracts. Baker's description was almost the same, although he didn't address the petal appendages.

This group consists of about 20 species, and I don't remember hearing of any of them, let alone seeing one of them! Perhaps some of them are in cultivation – I don't know. When I looked in Derek's files, the first three I searched for didn't have photographs, only old botanical drawings. This suggests they aren't very common.

² For example, he says *Pectinaria* have a simple spike, terete ovary and acuminate floral bracts, while *Pothuavia* have a simple spike, subterete ovary and small sepals. The only obvious distinction is whether the ovary is terete or subterete.

Here is the type plant,
Ae. sphaerocephala,
first described in 1842. It
certainly matches well, as you
can see the pine cone like
head, and the large green
floral bracts. The orange-red
leaf like structures are
peduncle bracts.



Aechmea sphaerocephala photo by Matthias Asmuss
Shown by Jose Abalo, winner at the SVCN 2006 exhibition in Venezuela



This is *A rodrigueziana*,
considered another *Cheveliera*
member, at least per Smith and
Downs. Photo by P. Bak 42(5) J.
Brom. Soc. 215 (1992). It looks
pretty different – it has a digitate
head, not strobiliform. Already we
are seeing that members of this
subgenus have rather different
features.

I was curious about this very different inflorescence so looked more up about this species. Derek's materials have an article from Professor Gouda that says "Although *A. rodrigueziana* was originally described in the genus *Gravisia* (= *Aechmea*), later it was wrongly placed in the subgenus *Chevaliera* by L.B. Smith (Smith & Downs 1979), likely because of the lack of petals in the known material and because it resembles *Aechmea digitata* L.B. Sm. & R.

W. Read.” Selbyana 20(1);2000. So it turns out it doesn't belong as a *Chevalieria*, but not because of the different inflorescence – it presumably has regular petal appendages. This is but a small example of how taxonomy works – more knowledge leads to a reevaluation of a species and its placement in a different subgenus.

By the way, this genus was named after a French botanist.

Podaechmea. Two of the current subgenera have pedicellate flowers. Smith distinguishes *Podaechmea*³ based on their compound and lepidote inflorescence, and armed sepals. There are only a handful of species. The type plant is *A lueddemanniana*, which is pictured in the June 2014 Newsletter.

Here is *A mexicana*, photo by Pedro Glucksmann. You can easily see the inflorescence is lepidote and has side branches (which makes it a compound inflorescence) and that each flower is attached to a side branch on its own stalk (the pedicels).



In contrast, all of the earlier pictures in this article show sessile flowers – there is no flower stalk.

Lamprococcus This subgenus, the name of which is derived from the Greek words for bright berry, also has pedicellate flowers like *Podaechmea*. The key says *Lamprococcus*⁴ has glabrous and simple inflorescences, and unarmed sepals, while *Podaechmea* have compound and lepidote inflorescences, and armed sepals. Thus, these two ought to be pretty easy to distinguish.

³ Baker didn't use this term – Mez created this subgenus. Apparently podos refers to foot in Greek, though I still don't know why the name *Podaechmea* was given.

⁴ Baker had a different description –a panicle with bright red axis and branches and unarmed sepals.



Above is the type plant for *Lamprococcus*, *Ae. fulgens*. [Houtte, L. van, Flore des serres et des jardin de l'Europe, vol. 2: t. 9 \(1846\) \[n.a.\]](#)

You can see it has a simple inflorescence and the flower stalks – wait a second – it has branches, which makes it a compound inflorescence, and the flowers don't seem to have stalks. You'll have to read next month's article to find out what is going on.

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Now compare this picture to that of *A gamosepala* shown below. The inflorescences look awfully similar but this one is in subgenus *Ortgesia*. *A fulgens* doesn't have connate sepals (it actually has "nearly free" sepals, but they look connate in this picture!); otherwise it would be in the *Ortgesia* subgenus. Even if it doesn't, you can begin to see why some might have wondered about the validity of the subgenera.



Aechmea racinae

A racinae Photo by Len Colgen. Here is another *Lamprococcus* member, which fits the description in the key pretty well. It has a simple inflorescence (no branches), and it is glabrous (no white flecking). It also has short pedicels.

Bus Trip info

next page

