



S.F.V.B.S.

SAN FERNANDO VALLEY BROMELIAD SOCIETY

JUNE 2018

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

sfvbromeliad.homestead.com

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

Twitter is [sfvbromsociety](https://twitter.com/sfvbromsociety)

Instagram is [sfvbromeliadsociety](https://www.instagram.com/sfvbromeliadsociety)

Elected OFFICERS & Volunteers

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

SFVBS - Bromeliad Show and Sale

June 9 and 10, 2018

Sepulveda Garden Center
16633 Magnolia Blvd.
Encino, California 91436

No meeting this month

Are you almost ready for the Festival of Plants?

Now is a good time to remove large pups and prepare to sell or donate pups for Club Sale. At the show we need Volunteer Docents, Volunteers for Reception & Membership
Help with Set-Up & Break Down

Prepare 2 or 3 plants

We still have time to get our plants ready. Each member should commit to have at least 3 plants ready for our show. Remove pups that are half or 2/3 the size of the mother plants. Wear long sleeves and gloves when handling the spiny plants. When potting tall or large plants, you can add a few rocks or broken pottery to the bottom of the pots to prevent them from falling over. Use proper potting mixture. Pot the plant and if necessary use chopsticks or small rocks to brace the pup upright; pup's root faster when stabilized. Place the pot on a bench or in an area where it will receive bright diffused light. Before the show wipe the leaves and flower pots with a damp cloth. In 15 minutes your 3 plants are ready to show. **Mother plants or large pups are now ready for the Show! Deliver display plants or sale plants on Friday between 9 and 5pm or Saturday morning before 8:30am.**

Announcements

Festival Bromeliad Program - 10:15 Sunday morning, June 10 at the festival - **Bryan Chan will give a program on Bromeliad Basics.** This is free and open to the public. We hope to have SFVBS members there mingling and encouraging visitors to attend the next SFVBS meeting. Arrive early for easy parking.

Announcements continued

- **Festival Bromeliad Display** – Even if you can't participate in the club's display, make sure you see it and Joyce has something special planned.
- **New Member** – Please welcome **Jennifer Culp** jenniferc@datahunter.com (714)894-6146
- **Felipe Delgado** - a relatively new member, has opened Instagram and Twitter accounts for the club. He is ready to begin accepting friends and followers. He will post meeting pictures and club info without using member names or photos unless he has permission. Felipe is also a monitor for the SFVBS Face Book page. Questions can be directed to fdelgado70@gmail.com 818-523-4488.

Instagram is sfvbromeliadsociety - can be searched from within Instagram typing @sfvbromeliadsociety

Twitter is sfvbromsociety- can be searched from within Twitter by typing @sfvbromsociety

Facebook - sanfernandovalleybs@groups.facebook.com

For members who are challenged by social media – you can google instructions. And next month we will try to provide instructions in the newsletter

- **June Birthdays** – *unfortunately we don't have any listed –please give Joyce the month or date of your birthday*
- **Wesley Bartera** has been a long time member of SFVBS. Many of our current members probably never met Wesley but the ones who know her will remember a kind, warm, loving lady and excellent cook. Both she and Ralph, her husband, have suffered some illnesses in the last few years so she hasn't been attending the meetings; however she faithfully pays her dues each year and stays in touch. We are sad to report that Ralph has died. If you know Wesley and want to attend a memorial celebrating the life of Ralph you may contact their daughter, Diana at dianaleebartera@gmail.com. You are invited to Diana's home in Pasadena on Saturday June 23

Please pay your 2018 Membership Dues

NEED TO RENEW ?.....

Pay at the meeting to: Membership Chair – Joyce Schumann 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 & Sunday June 8 & 9	<i>SFVBS Bromeliad Show & Sale</i>
Saturday July 7, 2018	<i>STBA= Speaker to be announced</i>
Saturday August 4, 2018	<i>STBA</i>
Saturday September 1, 2018	<i>STBA</i>
Saturday October 6, 2018	<i>STBA</i>
Saturday November 3, 2018	<i>STBA</i>
Saturday December 1, 2018	<i>Holiday Party</i>

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 or Bryan Chan bcbrome@aol.com <>

Member Contributions... submitted by Mike Wisnev.
Bromeliads in Ecuador, are courtesy of Jerry Raack.

Jerry Raack is a long-time bromeliad enthusiast (about 50 years!) who recently posted some great habitat photos he took in Ecuador. See <http://botu07.bio.uu.nl/Brom-L/>. He graciously allowed his pictures and emails to be used in the Newsletter. Thanks so much to Jerry for sharing these photos.



Jerry said the plant shown above is one of “the most beautiful of all *Tillandsia* I saw on my trip this week. Intense red inflorescence, compact growth with deep blue flowers. Note, the plant to the left with the old inflorescence is likely the same plant and shows it sends out a new shoot from just off center of the old inflorescence, much like *Guzmania sanguinea*. Growing in Azuay Province ... both terrestrially on road cuts, and epiphytically in trees.” This species hasn’t yet been definitively identified. *T. superba*??? had initially been suggested, but seems unlikely. In an email to me, Jerry “submitted photos of what the real *Tillandsia superba* looks like (see below), and this plant is very different from that. This plant is smaller and more compact than *Tillandsia superba*. It is possible that this is *Tillandsia buseri*, which itself has a rather confusing history in botanical circles, but it may also be something different.”



Two of pictures here show more of the same unknown species.

The picture on the upper right shows Jerry Raack in Ecuador on a trip with Jose Manzanares (the photographer) and others in 1997. He is holding *Tillandsia raackii*, a species he and Jeff Kent collected in 1990. Luther described it the next year and named it after him.



T. superba, shown below. Jerry says that as compared with the unknown species above, the "spikes of the inflorescence of *Tillandsia superba* are more numerous, longer and recurve downward from the main stem..."



Locality: Ecuador, Azuay Province. On left – “Road from Banos (Cuenca) to Soldados along the Rio Yanuncay at an elevation of 2800 meters.” On right “Also on Highway 35 8.2km south of Saraguro in Loja Province at 2883 meters altitude.” “Growing epiphytically in the trees. Large plants to more than one meter high in bloom with heavy inflorescences. All plants were post anthesis. Very beautiful inflorescence. “

Taxonomic Tidbits *Hohenbergia Part 1*

By Mike Wisnev, SFVBS Editor (mwisnev@gmail.com) Photos by Wisnev unless noted.
San Fernando Valley Bromeliad Society Newsletter – June 2018

Hohenbergia are often relatively distinctive – they are typically large and scurfy rosettes with large spines. They have tall inflorescences, but tiny flowers. There are currently 49 species, and many look similar. Most grow in Bahia, Brazil.

Early Bromeliad Society journals, then called bulletins, had a number of issues focused on one genus, and *Hohenbergia* got their turn in 1956. Mulford Foster, the editor (and president, not to mention an extraordinary field collector) said “Hohenbergias are not too well known horticulturally, but certainly there are a few species that have a definite place in our collections.” 6(4) BSB 50 (1956).



Foster had an article in that BSB called “Hohenbergia in Horticulture.” Mulford and Racine, his wife, collected *H stellata* in Brazil in 1939 and introduced it into cultivation. They brought back four other species I hadn’t heard of- perhaps it is because “most of them preferred live there [Brazil] and not in Florida.” Id at 56.

Hohenbergia alzmannii (left) is noteworthy for being the largest bromeliad the Fosters had seen. It can have leaves 4ft long and 10 inches wide, yet flowers 1/8 inch long!. The Fosters noted the difficulty of trying to make an herbarium specimen from a plant like this.

Photo by Mulford Foster, showing Racine. Id at 54.

The genus is more well-known now, but not all that much. While many seem to be in cultivation, at least based on the number of photos in FCBS, there aren't many seen at shows etc. here in southern California.

The most well-known species may be the one that looks most different than the others.

Hohenbergia correia-araujoii



Pereira & Moutinho described this species in 1980. This appears to be the only species with striped leaves - it is very distinctive. That same year, seven small specimens were sold at the World Bromeliad Conference "at high prices." 35(4) BSJ 149 (1985). By 1984-5, many of them were entered at bromeliad shows, and the plant had made its way to Australia as well. It looks much like a *Billbergia*, except for its scurfy leaves. It is often sold as *Hohenbergia Fudge Ripple*, but according to the BCR there is nothing particularly distinctive about plants with that name.

Pereira & Moutinho also described *Hohenbergia lanata* and *Hohenbergia estevesii* in 1980. *Hohenbergia lanata* has an all white lanate inflorescence as well, with blue flowers according to the collector. The picture in the link below, if correct, shows it with yellow flowers. https://en.wikipedia.org/wiki/Hohenbergia_lanata. *Hohenbergia estevesii* is similar, but with a denser inflorescence and shorter branches.

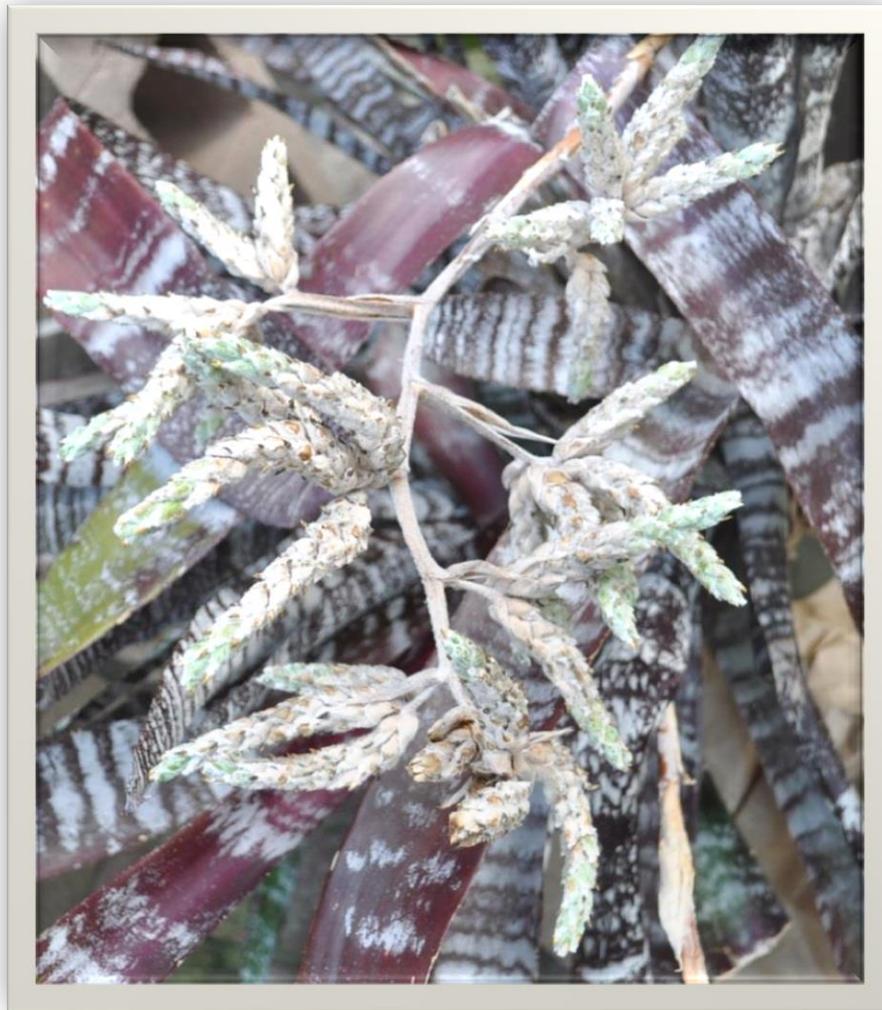
Subgenera. Most of the rest of the 1956 journal discussed *Hohenbergia* in Jamaica and Cuba. These Caribbean species were in subg. *Wittmackiopsis* and have mostly white flowers, bipinnate inflorescences and obtuse ovules. None of these species seem to be in cultivation around here. Species in subgenus *Hohenbergia* are found mainly in Bahia Brazil, and generally have yellow, green, purple, rose or blue flowers, often tripinnate inflorescences and apiculate to caudate ovules.



Hohenbergia *correia-araujoii*

As you see here and below, this species has a fairly large compound inflorescence with very hairy spikes and tiny yellow flowers.

In technical terms, these branches of Hohenbergia are considered “terete strobils.” You can see the full inflorescence on the next page.



Based on DNA testing, all of the species of subgenus *Wittmackiopsis* were recently moved to the resurrected *Wittmackia* genus. Interestingly, other members of the *Wittmackia* genus grow in eastern Brazil where *Hohenbergia* grow. *Wittmackia* was discussed in the August 2017 Newsletter and won't be further addressed here. As a result of this transfer, there are currently no subgenera.

Comparison to other genera. In addition to having a compound inflorescence with dense spikes, a key to the bromeliad genera distinguishes *Hohenbergia* and some *Aechmea* on the basis that the branches of the inflorescence form “terete strobils” (which you see above). <http://botu07.bio.uu.nl/bcg/encyclopedia/brome/>. Some *Aechmea* also have these features, but the two are distinguished by *Aechmea* having a well developed epigynous tube and and/or digitate inflorescence. *Hohenbergia* species have appendaged petals, free filaments and single pollen; this distinguishes them from *Hohenbergiopsis*, discussed in Part 2.

History. Compared to many other genera, this one has had a relatively uneventful history. The genus was described in 1830 by Schultes, filius (son), who also described *Dyckia*, *Cottendorfia* and *Navia* in the same publication by him, his father and Roemer. In that same publication, he described *Hohenbergia stellata*, which is the type species, along with *Hohenbergia capitata*, *Hohenbergia strobilacea* (now an *Acanthostachus*) and *Hohenbergia* ? *billbergioides* (now a *Canistrum*). He also treated then *Billbergia fasciata* as a questionable *Hohenbergia* – this is the incredibly well-known *Aechmea fasciata*.



Inflorescence of *Hohenbergia stellata* (type species) of Lee Brandt at a local show and tell. Like almost all other *Hohenbergia*, this species has is found in Bahia (and a few states to the north) in Brazil. However, it is the only species also found hundreds of miles away in northern Venezuela, Trinidad and Tobago. Smith & Downs’s key distinguishes most *Hohenbergia* species based on whether their floral bracts are “broadly acute or obtuse ones, usually mucronate” as opposed to having an “acuminate to a spinose apex” like *Hohenbergia stellata*, *rosea* and *catingae*.

Schultes also described *Hohenbergia capitata* the same year – it has a single head, thus giving rise to its name. It has had an unusual history. Baker treated it as *Aechmea capitata* in 1879, and then treated this species as a synonym of *Aechmea exsudans* (now a synonym of *Ae. aquilega*) a decade later. All others treated it in a similar fashion for the next 120 years! Elton Leme examined living specimens and revalidated it as a *Hohenbergia* in 2010. With its bright red bracts, it is a member of the *Hohenbergia stellata* complex, and considered close to *Hohenbergia belemii*. The latter grows terrestrially in sandy areas near the ocean, while *Hohenbergia capitata* grows epiphytically further inland at higher elevations.

Hohenbergia capitata, photo by Leme. 60(4) JBS 154 (2010).



Tillandsia augusta was described in 1831, and transferred to *Hohenbergia* by Morren in 1873. This species has many other synonyms, including *Pironneava glomerata*, the type species for this now defunct genus that was described in 1843. It is very different in that the inflorescence has dense brown wool.



Hohenbergia augusta, photo by Butcher.

Depending upon your botanist of choice, the genus disappeared in 1889 when Baker produced the first English monograph on the bromeliad family - the Handbook of the Bromeliaceae. Earlier Newsletters noted that he treated *Hohenbergia* as a subgenus of *Aechmea*. But I didn't realize until now none of the 34 species he placed in that subgenus are currently *Hohenbergia*! Instead, he placed *Hohenbergia augusta*, *stellata* and *capitata* (the latter two as synonyms of other species) in *Aechmea* subg. *Pironneava*. He also described four new *Aechmea* species in that subgenus that are now *Hohenbergia* - *Hohenbergia ridleyi* (very similar to *Hohenbergia ramegeana*), *eriantha* (found in Pernambuco, and unusual in that its secondary bracts are as long or longer than the branches), *blanchettii* (shown later) and *salzmannii*, shown earlier. Some of these had been illustrated by Morren earlier without a description; most of these illustrations are at Kew but have not been published.

Mez disagreed with Baker's approach, and moved these species back into *Hohenbergia* in 1891. He described *Hohenbergia membranostrobilus* that same year and *Hohenbergia ramageana* (shown next page) in 1896. While most species are found in Bahia, the former is found in Espirito Santo and Rio de Janeiro to the south, and is apparently named for the membranes of its sepals and floral bracts.

Ule described *Hohenbergia utriculosa* and *catingae* in 1908. Numerous varieties of *Hohenbergia catingae* have been described. Harms described *Hohenbergia horrida* in 1935 and Smith described five more species [*Hohenbergia littoralis* (unusual for its short compact inflorescence), *brachycephala* (unusual due to its serrulate floral bracts), *disjuncta* (discussed in Part 2), *minor* (similar to *Hohenbergia blanchetii*, but smaller) and *guatemalensis*] in 1940-1. Ignoring taxa later synonymized, it appears no more new species were described until 1972, when Smith described *Hohenbergia vestita*.

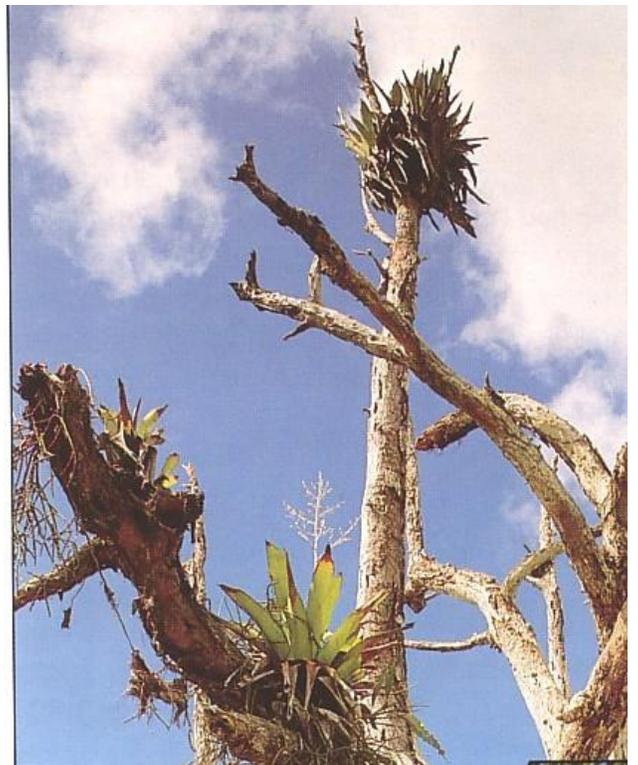


Photo by Bromelario Imperialis.

Leme says this species has a fairly wide range, and is rather variable. Despite the variability, Leme didn't follow Boracho who treated *Hohenbergia ridleya* as conspecific. Among other differences, Leme noted *Hohenbergia ridleya* had smaller sepals but larger floral bracts. Perreira says *Hohenbergia lanata* is similar but has longer branches, as is *Hohenbergia estevesii* but that has a denser inflorescence and more flowers.

In 1976, Read and Smith described six more species (*Hohenbergia rosea*, *belemii*, *pabstii*, *edmundoi*, *castellanosii* and *humilis*). Read stated:

While traveling in Bahia in 1975 with Dr. Gilbert S. Daniels, I got the impression that plants of *Hohenbergia* represented the dominant, large, epiphytic bromelioid genus in the region of Bahia around Itabuna. One of the most commonly seen species was *Hohenbergia blanchetii* with its huge, highly branched inflorescences resembling open Christmas trees perched in tree after tree along the road from Ilheus to Itabuna. Occasionally we recognized the large coned *Hohenbergia brachycephala* with its strongly angular cones on elongate stalks. Further south we found *Hohenbergia utriculosa* high in some tabebuia trees ... with its bright green, glossy cones and pink stalks... At about 700 m. elevation in a region where the warm humid air rises to form fog and low clouds, we spotted the brilliant rose-colored cones of *Hohenbergia rosea* growing high in the few trees still standing on a recently deforested hillside. 32 (3) BSJ 99 at 103-4 (1982).



Left – *Hohenbergia humilis*, “growing in dry sandy thorn scrub near Plan Alto, Bahia.” Id at 100-1. Photo by Read. **Right** – *Hohenbergia blanchetii*, photo by Leme. 36(6) JBS 244 (1986). *Hohenbergia humilis* is one of the smallest species, with leaves up to about 16 inches long, while *Hohenbergia blanchetii* can have leaves up to six ft long. However, the bluish-purple flowers of the two are about the same size – less than 1 cm long. *Hohenbergia minor* is similar to *Hohenbergia blanchetii*, but much smaller and with mucronulate (vs unarmed) sepals.

Hohenbergia castellanosii. 36(6) JBS - cover photo (1986) by Leme. This is one of the few species that is twice branched, rather than 3 times branched. As you can see, the sun has turned the leaves of this plant turn a brilliant orange when the plant flowers.

Both it and *Hohenbergia belemii* shown below were described by Read and Smith in 1976 and named after the person who found them. Both species have an inflorescence where the spikes generally are sessile (like *H humilis* above), rather than being on definite branches (like *Hohenbergia blanchetii* above).



Hohenbergia belemii.

Id at 245. Photo by Leme.



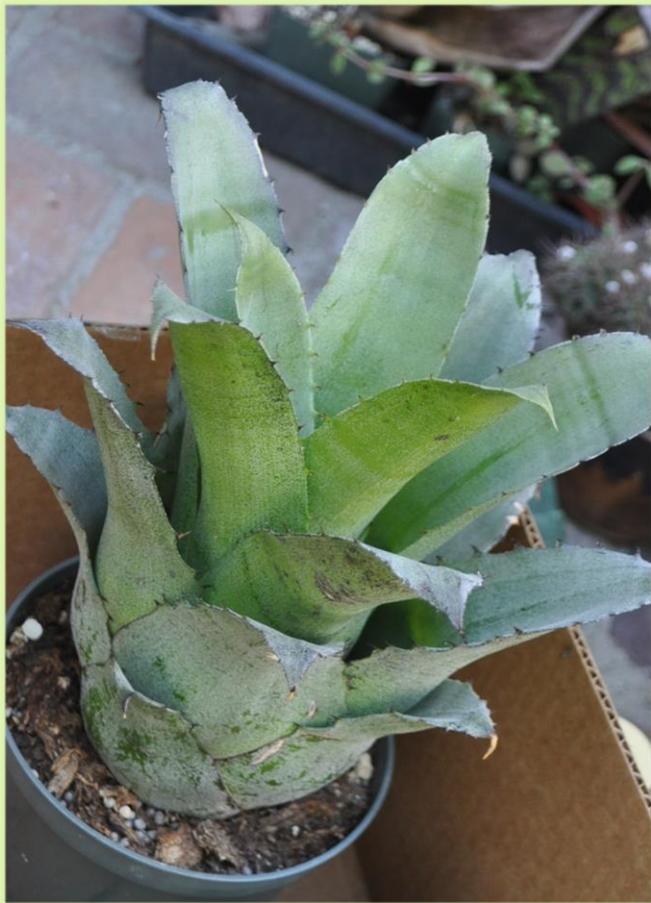
Fig. 4.

The rare *Hohenbergia belemii* was found flourishing in sunny areas with neighboring *H. castellanosii*.

The inflorescence here is not fully developed and will become larger and more branched.

With three exceptions, Smith & Downs recognized all of the 24 species above as *Hohenbergia* species. *Hohenbergia horrida* was treated as a variety of *Hohenbergia catinae* by Read & Smith, *Hohenbergia capitata* which was considered an *Aechmea* earlier and *Hohenbergia guatemalensis* was moved to a new genus. Thus, they recognized 21 species.

Species in cultivation. As far as I am aware, *Hohenbergia correia-araujoi* is the most frequently seen species. But a number of others are available. *Hohenbergia leopoldo-horstii* was described by Gross, Rauh and Leme in 1991 and named after its collector. It has become a coveted item for its sometime bulbous shape and leaves. Its inflorescence leaves much to be desired, however.



Hohenbergia leopoldo-horstii. Shown above is the same plant in July 2015 when I got it, and two years later. At first, it was thought *Hohenbergia leopoldii-horstii* was a form of *Hohenbergia vestita*, described by Smith in 1972. It was later recognized as a species: *Hohenbergia vestita* has smaller leaves and a bipinnate inflorescence with smaller spikes.

Next page – *Hohenbergia vestita*. I am not even sure these three plants are different clones. Mine, top left and bottom right, was from the person who showed the one at top left. It is starting to develop an inflorescence in May 2018.



Another plant in cultivation is *Hohenbergia rosea*, shown below. It also is starting to bloom.



Compare the inflorescence of *Hohenbergia vestita*, left, and *Hohenbergia rosea*, above right on May 1. Will they stay the same as they develop? If so, one is named incorrectly! There is one difference - the peduncle of *Hohenbergia rosea* is brownish, while the other is reddish. More importantly, the nature of the rosette is quite different.





Hohenbergia edmundoi is a similar species that seems to be in cultivation. Photos by Bromelario Imperialis. While *Hohenbergia vestita* has inflorescence spikes that are sessile, this species has them on branches. It is one of a number of species that have woolly inflorescences, including *Hohenbergia augustae* (the only one with dark brown wool?), *eriantha*, *utriculosa*, *ramageana* and *ridleyi*.

Part 2 will continue when the inflorescences of my plants labelled *Hohenbergia rosea* and *vestita* are fully developed.

References will be listed at the end of Part 2..

Taxonomic Tidbits –

Billbergia with predominately blue/violet/purple petals.

By Mike Wisnev, SFVBS Editor (mwisnev@gmail.com). Photos by Wisnev unless noted.

San Fernando Valley Bromeliad Society Newsletter –June 2018

Earlier Newsletters had 11 part article about *Billbergia* with green/yellow petals. (If interested, they start in February 2016 and conclude in January 2018). As I recall, they started in an effort to try to identify one of my plants, and ended up discussing every species of *Billbergia* subgenus *Billbergia* that had some yellow or green in their petals.

As noted in the earlier articles, of the roughly 34 species in subgenus *Billbergia*, about 26 have visibly green to yellow petals, but often with some (or quite a bit of) blue, violet or purple in them. In fact, only five (or six) species have all yellow or green petals (plus five varieties or forms of other species). Of the rest, 3 have blue tips, 12 have a considerable amount of blue and 5 more look blue since much of the green portion is covered by the sepals.

That leaves eight more species. This article discusses five of them, all of which have petals that are apparently all blue or violet. They are *Billbergia vittata*, *bradeana*, *lymanii*, *macracantha* and *brasiliensis*.

I'll dispense with *Billbergia brasiliensis* immediately. Smith treated it as perhaps a hybrid of subgenus *Billbergia* and the other subgenus of *Billbergia*, and thus listed it both keys. It seems more likely to be in the other subgenus, and since I have avoided that topic completely, I will ignore it once again.

Billbergia vittata is one of the more commonly seen *Billbergia* species. With its striped foliage, compound and pendulous inflorescence, large red bracts and pretty dark blue/violet flowers, it certainly is a worthwhile addition to any collection.



Illustration of *Billbergia vittata* var *amabilis*. 24 Belgique Horticole 19 (1874). This variety is no longer recognized. Image from the Biodiversity Heritage Library. Digitized by Smithsonian Libraries (www.biodiversitylibrary.org)

As can be seen if you look closely, the petals aren't actually all blue. You can see some lighter color on the petal just at the end of the sepals. As to petal color, Smith actually says "the apical third dark blue and the remainder white or pale green." In contrast, Barros & Costa say the petals are "rose with top 1/3 blue."

In Smith's key, this species falls in the group with a glabrous inflorescence and sessile flowers. Among that group, it occupies a rather unique position. Its sepals are setiform, that is, they have a bristly tip unlike other species with a glabrous inflorescence and sessile flowers. The sepals are also often recurved at the tip. You can see this a little in the picture above.

One of my favorite plants came without a label, but seems to match *Billbergia vittata* very well. In any case, it is one of my favorite bromeliads. Notice that it doesn't look all that different from *Hohenbergia correia-araujo* shown in the previous article, at least until you look at the inflorescence.



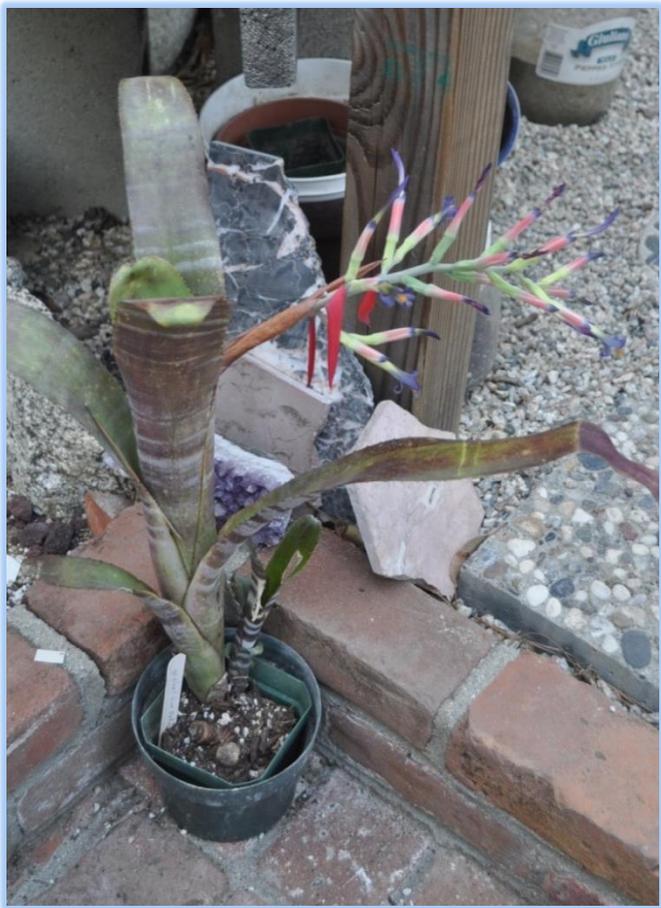
This species is also known for its great banding on the leaves and serious spines. But, like many others, it is variable. Some specimens have concolorous leaves, and others have almost no spination. Not too surprisingly, it is hard to find pictures of these latter forms – as is typical, the prettiest clones dominate in cultivation often giving a skewed impression to hobbyists about various species. One is shown Bromeliads in the Brazilian Wilderness, by Leme and Marigo, and it looks quite different since it is all dark green.

Below is the inflorescence of the plant in the previous picture. As stated by Smith & Downs, only the top 1/3 of the petals is blue; the bottom is light green. So even this purportedly blue flowered species has more green than blue!



Another *Billbergia vittata* cultivar is *Billbergia* ‘Colores’ shown on the next page. The Bromeliad Cultivar Registry (BCR) says it is a “cv. of *vittata* - Tall to 20" round tube flared at tips w/distinctive silver-purple to black coloration and markings - large intensely colored *vittata* inflorescence - highly recognizable and unique.” Actually, it isn’t clear mine is *Billbergia* ‘Colores’ – it is actually labelled “*Billbergia* x’Colores’ Beadle – got from Baker.” Don Beadle, who probably has produced more *Billbergia* hybrids than anyone, registered this cultivar, and presumably it was his clone. The x in my label, if correct, means that my plant is a seedling of *Billbergia* ‘Colores’, with an unknown pollen donor; Bill certainly did tons of hybrids, so this could be an open hybrid.

Again, more sun adds to the plant's attractiveness.



The December 2015 Newsletter had an article about colors and how they varied considerably on different websites. Smith & Downs said *Billbergia vittata* has a red scape, “red, rose or orange” scape bracts, and orange-red sepals with a blue apex (though most shown above seem rose colored). Baker said it bright red bracts, reddish sepals tipped with violet. In 2008, Barros & Costa covered all of the bases, stating the scape was “rose to purple,” rachis and scape bracts “rose, red or orange,” ovaries “rose, red or blue,” sepals “rose with top 1/5 blue” and petals “rose with top 1/3 blue.” Barros & Costa , for State of Rio de Janeiro, Acta bot. bras. 22(4): 1172-92. 2008 (translation by Butcher.)

Given all this variation, it is probably impossible to tell if a *Billbergia vittata* looking plant like mine shown earlier, or the X ‘Colores’ is the real species or a hybrid without DNA testing.

Mine isn't as nice as the clone shown on BCR.



Billbergia 'Colores' photo by L Vinzant

I guess I need to give mine more sunlight! But I have heard it is pretty hard to get them to look like they can in Hawaii. It is also pretty hard to compete with Lisa Vinzant, who has a nursery there and has produced scores of stunning hybrids.

I am not sure I have even seen a plant labelled *Billbergia vittata*! But one form of it is quite popular for obvious reasons. You might be surprised to learn that the well-known *Billbergia* 'Domingo Martins' is currently treated as a cultivar of *Billbergia vittata*. BCR says 'Domingos Martins' has a red scape, bracts, ovaries and sepals. Compare the description of *Billbergia vittata* above with the original description of *Billbergia domingos-martinsis* by E. Gross in 1988./ Gross said it has a "green scape, carmine red ovaries, scape bracts pink (bottom ones) and cinnabar red (top ones), dark blue sepals later cinnabar and petal tips cornflower blue, later reddish, the bottom white." Trop. Subtrop. Pflanzenwelt 65:65-7. 1988 (translation by Butcher). Cornflower blue??

These two pictures again show how the sun can make a huge difference.

Billbergia 'Domingo Martins'



The Bromeliad Cultivar Registry says this is a “cv. of *vittata* collected in Brazil - Originally classified as new species *domingosmartinsis* then reclassified as cultivar of *vittata* - unique appearance - tight few-leafed upright tube in deep green to black w/clear white areas throughout but largest toward the base - heavy black spines - typical *vittata* inflorescence except w/red scape, bracts, ovaries and sepals. Collected from Kautsky's Mountain near the town of Domingos Martins, Brazil.” For good reason, this cultivar is being used quite a bit for new hybrids. It appears that Luther and Sieff first referred *Billbergia domingos martinsis* to *Billbergia vittata* in De Rebus Bromeliacearum I in 1994. Selbyana Vol. 15, No. 1, BROMELIADS (1994), pp. 9-93. This is a listing of all “references to taxonomic changes” that were not included in Smith and Down’s monograph that were published prior to February 1993. Like many of the referrals in the monograph, there is no explanation for the referral here.

B. vittata has a fairly large range. “Geographical distribution: the species is distributed in the States of Minas Gerais, Espírito Santo and Rio de Janeiro, in the Forest Atlantic Pluvial montana and high montana (Smith & Downs 1979; Fontoura et al. 1991), rupestral fields and gallery forests of the Cerrado, to 2.000 m altitude (Versieux & Wendt 2006). In Rio de Janeiro its occurrence is restricted to the Forest Atlantic Pluvial montana and high-montana, starting from 800 m altitude.” Barros & Costa, for State of Rio de Janeiro, Acta bot. bras. 22(4): 1172-92. 2008 (translation by Butcher.)

The other three *Billbergia* (in subgenus *Billbergia*) with all blue-violet flowers are not very well known. One is *Billbergia lymanii*, shown below. Photos by D. Butcher.



Billbergia lymanii, doesn't have all blue/violet petals. Described in 1984 by Pereira & Leme, it has red petals with a blue apex, but they are more blue than red. “The typical variety was described from the State of Espírito Santo and the authors related it to *Billbergiavittata* because of the pattern of colours and for the posture of the petals, although it differs from this by the presence of indumentum on the scape and the rachis, the apex of the sepals not hairy and the pedicellate flowers.

“Barros & Costa , for State of Rio de Janeiro, Acta bot. bras. 22(4): 1172-92. 2008 (translation by Butcher.) Barros & Costa thought it was more similar to *Billbergia amoena* based on its size and inflorescence.

Smith’s treatise also lists *Billbergia buchholzii* as having blue petals, despite noting it was “never collected from the wild and probably of hybrid origin.”



Billbergia buchholzii, on Bromeliad Cultivar Register.

Photo by Rodney Kline.

Mez first described this plant in 1919 and stated “I obtained examples from three different gardens under three different incorrect names. It is unanimous that it is a garden-hybrid; it is named in honour of the Garden-inspector Buchholtz, my co-worker in the cultivation of Bromeliaceae.” Repert. Sp. Nov. 16: 7. 1919.

Derek has written extensively about this plant – see the Bromeliad Cultivar Register for more information. There are lots of ties to southern California.

The other two species are very poorly known, at least in cultivation. In fact, I can't even find a picture of *Billbergia macracantha*. Described in 1975 by Pereira, its linear petals are "totally indigo" and its lanceolate sepals are pink with an indigo tip. One would think that there would be pictures of a species recently discovered like this, but it looks like the publication just included drawings.

Almost equally obscure is *Billbergia bradeana*. Known only from the type locality in Castelo, Espirito Santo, it would be interesting to see since it apparently has both blue sepals and 5 cm. blue petals. Here is a link to the only pictures I can find of a plant with this label. <https://twitter.com/kewgardens/status/713772993625911296>. Frankly, the ID is questionable - it looks much like *Billbergia amoena*.

As has been seen, even these species don't have all blue petals, at least those that can be found with photographs.
