

S.F.*V*.**B**.S.

San Fernando Valley Bromeliad Society

JANUARY 2019

P.O. Box 16561, ENCINO, CA 91416-6561 sfvbromeliad.homestead.com

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Elected OFFICERS & Volunteers

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

next meeting: Saturday January 5, 2019 @ 10:00 am

Sepulveda Garden Center 16633 Magnolia Blvd. Encino, California 91436

AGENDA

SET UP & SOCIALIZE 9:30 -**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 by*:

Steve Ball, Bryan Chan and Richard Kaz

"The Life and Times of Bill Baker"

Bryan, Richard and Steve will be presenting their memories, experiences, and contributions of long time San Fernando Valley Bromeliad Society member Bill Baker through an informal panel. California Gardens, Bill's nursery, was a mecca for plant enthusiasts to acquire knowledge and plants. He was a landscaper, plant breeder, collector, and nurseryman whose name is known throughout the world. Bill will be remembered and honored for what he has contributed to the horticultural community. $\langle \rangle$

11:15 - Refreshment Break and Show and Tell:

Will the following members please provide refreshments this month if your last name begins with "A", "B" or "C" 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 <>

Note: Check the website below. Usually the last Sunday in January a day is reserved by about 30 museums in Southern California offering free admission. Some (such as the Getty) offer free admission throughout the year; look for a list on the last page of this newsletter.

http://www.socalmuseums.org/free-for-all

<u>Announcements</u>

- <u>Last month the Club elected a few New Officers and Directors</u>. Congratulations to Joyce Schumann, new Vice-president, Stephanie Delgado, chair of Membership and Carole Scott, a new director. Many thanks to outgoing officers and directors Carole Scott (co-president), John Martinez (vice-president), Joyce Schumann (membership chair) and Mary K (director).
- <u>Snail mail Newsletters</u> If you don't have email, you should ask a friend to look at our club web page. sfvbromeliad.homestead.com. You are probably missing some great bromeliad articles written by Mike Wisnev. Those articles are a means for him to share his research with the general membership.
- <u>Holiday party photos</u> provided by Illona are on page 20.
- *<u>Happy Birthday</u>* to *James Johnson, Leni Koska* and all members with birthdays this month (hopefully we will soon have an updated list)
- <u>Participation Rewards System</u> 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
- <u>100 Free Things to Do in Los Angeles: Free Museums ...</u> https://www.discoverlosangeles.com/blog/100-free-things-do-los...

Please pay your 2019 Membership Dues

NEED TO RENEW ?.....

Pay at the meeting to: Membership Chair – Stephani 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 \$20 for snail mail

Please Put These Dates on Your Calendar

Here is our 2019 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 Feb 2, 2019	Guillermo Rivera - World Tours of Bromeliads
Saturday March 2	STBA
Saturday April 6	STBA
Saturday May 4	STBA
Saturday June 1	STBA
Sat & Sun - June 8-9?	SFVBS Bromeliad Show & Sale
Saturday July 6	STBA
Saturday August 3	STBA
Saturday September 7	STBA
Saturday October 5	STBA
Saturday November 2	STBA
Saturday December 7	2019 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 the VP, Joyce Schumann at <u>818-416-5585</u> or <u>ropojo@pacbell.net</u>

This section is open for Member contributions of photos or articles.... This January article is a welcomed addition by Mike Wisnev with permission of the author

Bromeliads in Ecuador; 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 <u>http://botu07.bio.uu.nl/Brom-L/</u>. He graciously allowed his pictures and emails to be used in the Newsletter. Thanks so much to Jerry for sharing these photos.

The plants below have been tentatively identified as *Tillandsia (Mezobromelia)*

schimperiana.

Jerry says "I consider this to be one of the most beautiful of all bromeliads to be found in this area. It is startlingly carmine red. Flowers were not open at the time I saw it in the 3rd week of January. The inflorescence had as many as 30 to 35 spikes on a single inflorescence and the plants were close to 80 cm in diameter."



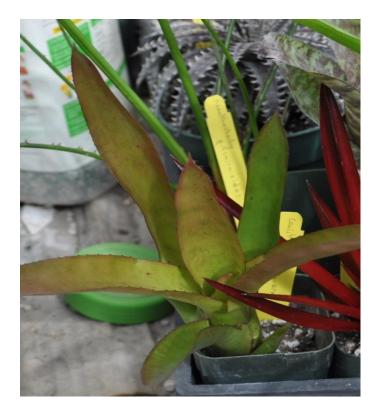


Taxonomic Tidbits **Lanistrum**, **Wittrockia**

Edmundoa and more – Part 54 (Canistropsis)

By Mike Wisnev, SFVBS Editor (<u>mwisnev@gmail.com</u>) Photos by Wisnev unless noted. San Fernando Valley Bromeliad Society Newsletter – January 2019

Parts 1 - 3 addressed *Canistrum, Edmundoa and Wittrockia*, all originally part of Nidularioid complex, although DNA studies now suggest *Canistrum* isn't part of it. This article addresses *Canistropsis* which are also part of the complex. They aren't very commonly seen around here - I don't recall ever seeing one in the shows.



Canístropsís

correía-araujoí,

potted up back in 2012. It was impossible to tell much about the genus from that plant. It could well have been Neoregelia or an Aechmea, or almost any of the Nidularioid complex genera. The hint of red in leaves was promising. Leaf color often changes quite a bit in different conditions. Would mine become more red or green?

Basics. *Canistropsis* are small to medium sized plant with relatively narrow rosettes. The leaves are usually thin, and not spiny. The petals are usually spreading at anthesis, and often remain that way afterwards. They generally propagate via long slender stolons.

Their compound inflorescences differ quite a bit. Some species have clones with different colored inflorescences. Some are somewhat wooly, some lepidote and some glabrous. While there are no subgenera, the species can be divided into two groups, one with an involucre similar to *Nidularium*, and the other without one more similar to *Neoregelia*. The length of the peduncle can vary, but can usually be seen unlike Neos.

With regard to traditional taxonomic features, they generally have sessile flowers with symmetric sepals and free petals with appendices. The petals are suberect to spreading at anthesis.

While *Canistropsis* became a genus in 1998, the name goes back to 1891 when Mez described *Nidularium* subg. *Canistropsis*. The suffix "opsis" is Greek for "resembling" so these species resembles *Canistrum*. Like almost all members of the Nidularioid complex, they grow in eastern Brazil. They have a fairly extensive range, from Santa Catarina in the south up to Bahia

History. When Mez first described the subgenus in 1891, it had two species – one is now known as Canistropsis *burchellii* and the other was synonymized with *Wittrockia superba a* few years later. It was distinguished from other *Nidularium* based on its branched and umbellate inflorescence and tomentose sepals.

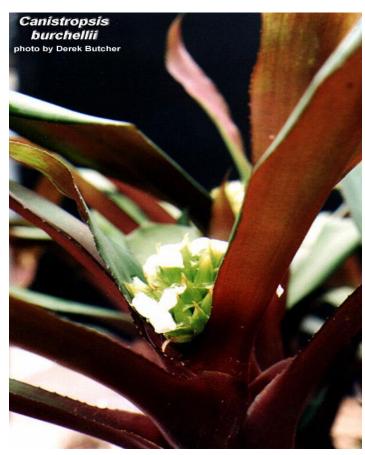
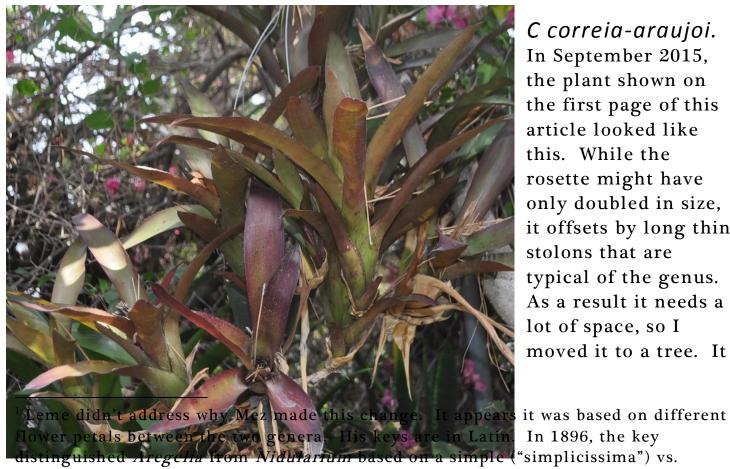


Photo by Butcher. The type species is Nidularium pubisepalum, a synonym of C burchellii.

That species was first described as an Aechmea in 1879.

Like three other Canistrum species, this one does not form a cuplike (involucral) inflorescence. The ones with a cuplike inflorescence have lower primary bracts that are pretty tall - above the flowers. Here the lower ones are pretty short (much lower than the flowers), and the inflorescence is more like a rounded head.

Elton Leme, who has published four books on this complex, including Canistropsis - Bromeliads in the Atlantic Forest ("Canistropsis Book"), explains that the history was a bit more convoluted. In 1935, Mez moved the subgenus (and Nidularium microps) to Aregalia, which was the term Mez used in 1896 for Neoregelia.¹ In 1955, Smith moved these two species to Nidularium, but didn't reinstate subg. Canistropsis until his 1979 monograph. He distinguished it from subg. Nidularium based on its spreading acute petals, lanate inflorescence and smaller less connate sepals. Pereira and Leme expanded the subgenus with nine new taxa. Finally, in his *Canistropsis* Book, Leme elevated it to a genus. (As an aside, the name of the genus should have been Andrea, another topic.)



C correia-araujoi. In September 2015, the plant shown on the first page of this article looked like this. While the rosette might have only doubled in size, it offsets by long thin stolons that are typical of the genus. As a result it needs a lot of space, so I moved it to a tree. It

compound inflorescence. His 1934-5 key stated Aregelia have a frequently simple inflorescence ("saepissime simplex") and patent petals with acute or acuminate apices. has about ten heads now. The picture doesn't really do it justice.

You may recognize the species name – there are similarly named and very well-known species of *Aechmea, Hohenbergia* and *Neoregelia*, as well as a *Vriesea* and *Cryptanthus* that are not as well known. They are named after Luiz K. Correia de Araujo, "a pioneer of organized bromeliad cultivation in Brazil" according to Leme.

C correia-araujoi is unusual for a *Canistropsis*. Like a *Neoregelia*, it has somewhat stiff leaves and the central leaves become more colorful upon flowering. Like a *Nidularium*, the petals are joined more than halfway up

their length. Leme wonders if it may actually be a bi-generic hybrid, and even notes possible parents which grow in the area. It is only known from one area which might also be consistent with a hybrid origin (Jacareagua, Rio De Janeiro, Brazil).



C. 'Gulz' is a *C. billbergioides* cultivar. Photo by Vic Przetocki. All of the *C. billbergioides* photos in this article are from the Bromeliad Cultiver Register *C. billbergioides* has the widest distribution in the genus, more or less the same as the entire genus. As seen in the various photographs in this article, it also shows greatest variation in color in the genus. Leme notes that most populations have a single color for their bracts, but nearby populations can have different colored ones. Forma *azurea*, which is known for its blue flowers (as opposed to white) and red bracts. Unlike *C. burchellii* pictured earlier, it has a taller inflorescence, and the basal primary bracts extend beyond the flowers. While all of the species with short primary bracts have short peduncles, some of those with long bracts have short peduncles and others have long ones.

Comparison to other genera. Leme's key to the genera of the Nidularioid complex is found his *Canistropsis* Book. It distinguishes *Canistropsis* as follows:

- Unlike other members of the complex, *Canistrum* and one small subgenus of *Neoregelia* have asymmetric sepals with a wing. You can see this feature in Part 1 of these articles.
- 2. The remaining *Neoregelia*, and some *Wittrockia* generally have a simple (or pseudosimple) inflorescence. *Canistropsis, Edmundoa, Nidularium* and the other *Wittrockia* have a distinctly branched inflorescence. Neo flowers also spiral after anthesis, unlike *Canistropsis* and the other genera.
- 3. *Nidularium* have an inflorescence with a deep involucral that holds water for many days, and bracts that conceal the sepals. They also have erect hooded petals. *Canistropsis, Edmundoa,* and the other *Wittrockia* don't have these features. While many *Canistropsis* have an involucral, it is not as deep and doesn't conceal the sepals. Its petals are usually spreading.
- 4. *Edmundoa* have a densely lanate (wooly) inflorescence (including floral bracts) even after flowering. *Wittrockia and Canistropsis* have glabrous or less wooly ones; the key (p17) says they have "Scape and inflorescence glabrescent to lepidote; if lanate, then scape and inflorescence becoming inconspicuously woolly to glabrescent after anthesis, floral bracts glabrous, even before anthesis, to inconspicuously lanate, and the inflorescence to 6 cm in diameter."
- 5. *Wittrockia* generally grow by short stout stolons. In contrast, *Canistropsis* generally grow by long slender stolons.



C 'Mandarin', another very attractive *C* billbergioides cultivar. Like some other species, the leaves are green on top, and red on the bottom.

C billbergioides is probably the most well-known species. Quite a name – a genus resembling Canistrum and a species like Billbergia.

This species has the longest peduncle in the genus, at least relative to its leaves. It is raised well above the base of the rosette (16-40cm). It can have green, red or variegated leaves and its bracts can be different shades of yellow, orange, pink or red. As a result, there are many cultivars, most of which have been named after fruits to designate their color.

The key (p17) describes *Canistropsis* as follows: "Plants propagating by slender stolons 0.3-0.8 cm in diameter; if stolons over 0.8 cm in diameter, then the inflorescence 11-21 cm long; leaves thin in texture or sometimes subrigid, minutely spinulose, spines 0.5-1 mm long; flowers 20-35 (-38) mm long; apex of the sepals subrounded and apiculate to acuminate."

Keys are artificial, that is, they are not necessarily intended to show relationships or plants that look alike, although they might. While *Canistropsis* may be next to *Wittrockia* in the key, they don't look at all like them and are pretty easily distinguished. Depending on the species, *Canistropsis* are more likely to be confused with *Neos*, *Canistrum* or *Nidularium*.

The previous picture of *C correia-araujoi* shows the long slender stolons quite well. What about the other features?



C correia-araujoi while flowering and while rotting. With an inflorescence at the base of the rosette and a blue flower, it looks much like a Neo. However, the inflorescence is still a bit taller than that of a Neo. It doesn't have a large cuplike inflorescence to hold water (like Nidularium), nor is it wooly (like Edmundoa). Notice the petals are suberect, as opposed to the spreading petals of C. billbergioides. I didn't clean the plant up to take its picture -I wasn't intending to use it for an article. But then I usually don't clean them up - the debris from the tree is natural fertilizer. Both it and the flowers will rot, giving the plant nutrients.

You can't tell inflorescence is branched from the first picture above. I was curious, so I took a few rotting ones out. The second shows it with the bracts removed and separating the four sets of flowers – each group, or fascicle, is on a different branch. Leme describes this one as "inconspicuously tripinnate." I guess it qualifies – you can't really see the secondary branches. You can also see that it has a relatively long scape compared to a Neo.

Species with short primary bracts. In his key to the genus, Leme lists four species with a capitate inflorescence and short basal primary bracts. For this reason, many had been described before as *Neoregelia*. All of these also have relatively short peduncles as well. *C burchellii*, the type species, falls into this group.



C. marceloi. Photo by Carol Johnston. 34(2) BSJ 78. *C marceloi differs* from other *Canistrum* due to its pedicellate flowers. As a result it was described as Neo in 1980, and Pereira & Leme left it there in 1986. As noted in prior articles, in his books Leme did not rigidly rely on isolated features and moved it to *Canistrum* based on other features. The species is also unusual since it has densely lepidote leaves- mainly on the underside, but some on the top side as seen below. It has red primary bracts and long stolons, sometimes a foot long. It is named for the son of *Luiz* K. Correia de Araujo; Marcelo found the plant while assisting his father. *C albiflora* differs from others due to its more tubular shape; most *Canistropsis* are funnelform in shape. Smith first described it in 1943 as a *Neoregelia*. It is a delicate species that grows in a very wet habitat – hardly a good candidate for us to grow.

C simulans is named due to its imitation of *C. burchellii*. Leme notes they look extremely similar. I showed the two pics to Ana, my wife, who rolled her eyes when I told her they were different species. Leme says they grow in distinct areas but also notes some overlap. It does have a shinier leaves with a different anatomy, a shorter inflorescence and larger flowers and sepals, which aren't lepidote.

Species with long primary bracts. Seven current species have longer basal primary bracts. Leme's key (p24 of his *Canistropsis* Book) says they have "Basal primary bracts equaling to distinctly exceeding the fascicles of flowers; inflorescence rosulate-capitate to distinctly involucrate." *C billbergioides* is in this group.

Two more *C billbergioides* cultivars are below.



C. 'Blood Orange'



C. 'Guava'

Of these seven species, *C. correia-araujoi* with its capitate inflorescence has the shortest relative bracts, barely exceeding the flowers. It is also one of the three species (with C. *pulcherrima and microps*) with a capitate inflorescence that is fairly short. *C pulcherrima* has an obconic-capitate inflorescence that is much like *C. billbergioides* with shorter but more robust. Found in one location in Rio de Janeiro, its habitat appears to be destroyed.

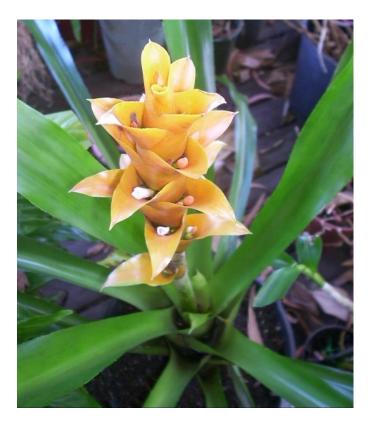
C microps (first described as a *Nidularium* in 1891) has an obconic-capitate inflorescence that is about 3 inches high. It has relatively long and narrow leaves, which may be why there aren't many pictures of it available. The normal form has green leaves and red primary bracts that are long and stellate like *C billbergioides*. Forma *pallida* has green bracts. The abaxial side of the leaves of forma *bicensis* is red. The flowers are fragrant. Its fruits are unique – they are white at the base and blue at the top.

C. billbergioides and the three remaining species have both long bracts and a long inflorescence that extends above the leaf sheaths.

As you can see below, *C. seidelii* has a very long inflorescence, with large primary bracts. Its inflorescence that is shaped quite differently than other species in the genus – it is subcylindrical. Its primary bracts can be many colors, like those of *C billbergioides.* Found in north Sao Paulo by Alvim Seidel in 1962, it was named after him. Seidel introduced dozens of bromeliad and orchids into horticulture.



Canistropsis seidelii var. welteri photo by D Butcher



Two clones of *C seidelii*. Photo on left by Derek Butcher; photo on right by Ian Hook, courtesy of <u>http://www.bromeliad.org.au</u>. The first is sometimes called var. *welteri*, thought Leme said it wasn't validly published and didn't warrant variety status since it was within the normal range of colors. It appears it was later published, and is listed on the Bromeliad Taxon List.

C elata was described as Nidularium *microps* f. *elatum* by Pereira & Leme; *elatum* was derived from the fact the inflorescence is taller than other forms. Leme determined it has more features similar to *C. billbergioides* (habit, tall stellate inflorescence, leaf pattern) than *C microps* (slightly fragrant flowers and petal structure) and made it a species in 1998. It has disappeared from its only habitat, but is in cultivation.



Canistropsis elata, photo by Dennis Cathcart. It is another species whose leaves are green on the adaxial side and red on the abaxial side.

C exigua, another species with a tall inflorescence, was added to the genus in 1998, bringing the number of species in the genus to 12. *C. exigua* is unusual in various ways. It is odd looking – it has leaves that are 1-2 ft tall but about an inch or less wide! The leaves have a canal in the middle that runs the length of the leaves. In 1985, Pereira & Leme first described as a *Canistrum* since it has free petals with petal appendages. (Recall that in 1985 *Canistropsis* was a subgenus of *Nidularium; Nidularium* petals do not have appendages and are usually connate.)

In addition, unlike "development observed in the other species, where scape growth is concurrently proportional to that of the inflorescence (e. g. *C. billbergioides, C. selloana),* the inflorescence of *C. exigua* becomes almost fully developed while still nestled in the leaf rosette. It is then thrust quickly upwards as the floral scape triples its length in the space of a few days." *Canistropsis* Book at p.55.



Canistropsis elata, photo by Dennis Cathcart who sent it to me for the article. Note the hint of both blue and green on the white petals. Many species have some green at the base of the petals. Its flowers are weakly fragrant. While the inflorescence is much like *C billbergioides*, the petals are quite open and recurved as you can see. In addition, you can see that the spent flowers remain spreading and don't recurve like Neos. Leme calls this "spreading – flaccidescent."

No new species have been described after 1998. In contrast, one of the 12 species noted in the *Canistropsis* Book, *C. selloana*, was moved to a different genus and won't be discussed here.

More on branched inflorescences. As noted above, *Canistropsis, Canistrum, Edmundoa and Wittrockia* are supposed to have branched inflorescences, but I hadn't observed this since I didn't know this when the pictures were taken. By now I was really curious. While finalizing this article this year, I looked at my Nidularioid complex species for an inflorescence and found one on my *Canistrum seidelianum*, which was shown in Part 1 of these articles. It was completely dried up, but that wasn't a problem.



Canistrum seidelianum.

This photo shows the compound inflorescence with branches. They are small, but they are branches. The photo also shows the flower fascicles on each branch, and the long peduncle. Note the name of the species; like *Canistropsis seidelii*, it was named after Seidel. So were *Aechmea seideliana*, *Cryptanthus seidelianum*, *Billbergia seidelii*, *Neoregelia seideliana*, *Quesnelia seideliana*, *Quesnelia alvimii*, and Vriesea fosteriana seideliana.

Another tidbit. Last month's article noted that Leme transferred a couple *Wittrockia* to *Aechmea* in 1997 (*A. echinata and paradoxa*). With two other species, they formed an *A. mollis* complex from south Bahia. The other species in the group is *A. weberi*, which had first been described as *Nidularium weberi* in subg. *Canistropsis* by Pereira & Leme in 1986.

Recent Taxonomic Studies. Four of the studies discussed in previous parts of this article all placed the sampled *Canistropsis* species in the

Nidularioid complex. It is less clear if it will remain a good genus. Two of them only included C microps and billbergioides and they were grouped together.²

In contrast, the 2017 morphological study found that *C burchellii* was closer to Neos, while *C billbergioides* was closer to *Nidularium.*³ Finally, the 2015 Study included 9 of the 11 *Canistropsis* species and found they were all closely related, but not monophyletic since other Nidularioid complex members were in that clade. ⁴

² De Oliveira F.M.C, R. Louzada, M. Wanderley and G. Melo-de-Pinna Morphoanatomical characters in the Nidularioid Complex (Bromeliaceae: Bromelioidae) from a phylogenetic perspective . *Flora* 239 (2018) 111-121.

Silvestro, D., G. Zizka, and K. Schulte. 2014. Disentangling the effects of key innovations on diversification of Bromelioideae (Bromeliaceae). Evolution 68: 163–175

³ Santos-Silva, F., Venda, A.K., Hallbritter, H.H., Leme, E., M.C., Mantovani, M., and Forzza, R.C. Nested in chaos: Insights on the relations of the 'Nidularioid Complex' and the evolutionary history of *Neoregelia* (Bromelioideae-Bromeliaceae). Brittonia 69 (8). 2017

⁴ Evans, T.M., R. Jabaily, A.P. de Faria, L.O.F. de Sousa, T. Wendt, and G.K. Brown. 2015. Phylogenetic Relationships in Bromeliaceae Subfamily Bromelioideae based on Chloroplast DNA Sequence Data. *Systematic Botany*, 40(1):116-128.







Free Museum Days - Los Angeles Area

(check before visiting venues for changing information)

Autry National Center of the American West Free - second Tuesday of every month. <u>The Broad</u> Free - always. <u>California Science Center</u> Free - always. <u>California African American Museum</u> Free - always. <u>Craft and Folk Art Museum</u> Free - every Sunday. <u>Dominguez Rancho Adobe Museum</u>

Free - always. Fowler Museum at UCLA Free - always. **Griffith Observatory** Free - always. J. Paul Getty Museum Free - always. Hammer Museum at UCLA Free - always. Huntington Library Free - first Thursday of every month. Institute of Contemporary Art, Los Angeles Free - reopening fall 2017. Japanese American National Museum Free - third Thursday of every month, all other Thursdays 5-8pm. Los Angeles County Museum of Art Free - second Tuesday of every month and select federal holidays, always 17 and under plus one adult with NexGen membership. Every weekday 3pm-close (residents only). Los Angeles Museum of the Holocaust Free - always. Museum of Contemporary Art, Los Angeles Free - every Thursday 5-8pm, always Jurors with ID. Natural History Museum of Los Angeles County Free - first Tuesday of every month except July and August, every Tuesday in September, check calendar, EBT card holders always free. Norton Simon Museum Free - first Friday of every month 5-8pm, EBT card holders always free. Pacific Asia Museum Free - closed until late 2017. Page Museum La Brea Tar Pits Free - first Tuesday of every month except July and August, every Tuesday in September, EBT card holders always free. **Travel Town Museum** Free - always. USC Fisher Museum of Art Free - always. **UCLA Meteorite Gallery** Free - always.