



S.F.V.B.S.

SAN FERNANDO VALLEY BROMELIAD SOCIETY

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APRIL 2016 NEWSLETTER

OFFICERS

Pres: **Mike Wisnev** V.P.: **John Martinez** Secretary: **Leni Koska** Treasurer: **Mary Chan**
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Editors: **Mike Wisnev & Mary K.**, Snail Mail: **Nancy P-Hapke**

next meeting: Sat. April 2, 2016 @ 10:00 am
Sepulveda Garden Center 16633 Magnolia Blvd. Encino, California 91316

AGENDA

9:30 – SET UP & SOCIALIZE

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

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

10:15 - Introduce *Speaker: Andy Siekkinen*

Program Topic:

Brazil Part II: “Chapada Diamantina”



Chapada Diamantina is a large and spectacular national park in the state of Bahia. It is part of the 'caatinga' which is similar to the dry thorn forests of Mexico. Known for its widespread rock formations it is home to many spectacular views and amazing

plants, or course including some beautiful bromeliads. There are beautiful orchids, cactus, and Vellozias, but naturally the focus of this talk will be on the more than 10 genera of bromeliads--especially the genera Hohenbergia and Orthophytum/Sincoraea. This is an amazingly rich biome that has been spared much of the problems of the Atlantic forest, but after my trip much of the park has been decimated by fires and changes in the climate will continue to present many problems for many of these narrowly endemic plants.

Andy is one of our BSI Regional Directors for California. He has been guest speaker at all of the Bromeliad groups in our area as well as many other groups around the country.

His presentations are engaging and entertaining yet they contain much technical information geared towards education about the plants; his love of science is evident. Recently he received the 2016 Annetta Carter Memorial Fund grant, for his proposed research: "Searching for Hechtia gayorum, the Baja Endemic Bromeliad." This fall he will begin his PHD studies at Rancho Santa Ana Botanic Garden/Claremont Graduate University. As former president of the San Diego Bromeliad Society and the Balboa Park Bromeliad Study Group and a BSI Director, Andy is a great advocate for our hobby; spreading the word about Bromeliads up and down the California coast to anyone who will listen and his participation on the social networks is also very helpful for our hobby. <

11:15 - Refreshment Break - Will the following members please provide refreshments this month: ***Dana Groina, Nancy 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. Questions about refreshments? Contact Kathleen at 818-402-6031 or leenest@aol.com
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 <

President's Message

Reminder - Saturday April 16 for our Club picnic, hosted by Mary and Bryan Chan at their home.

See picnic details on [page 21](#).

Mike Wisneu

Mary K is taking a look back at last month..... Marquita Elias was a first time speaker for our group. She gave an excellent presentation of her trip with CSSA to the Canary Islands. A special thanks to *Ray VanVeen* for donating about 3 dz. raffle plants. And others who deserve thanks for **raffle plants** are *Nancy, Steve Ball, Kathleen, and Mary K*. Thanks for the **Show-n-tell plants** brought in by *Nancy, Steve, Bob Wright, Bryan Chan, Kathleen, Colleen Baida and Leni Kosko*. We had a nice number in attendance, attending our meetings is important. Please welcome our newest member, **Pat Colville**. As usual we had lots of great **refreshments contributed** by *Kathleen Misko, Nancy Hapke, Steve & Maryk, Bob Friedman, and Mardy Graves*. *Mary Chan* and *Ray VanVeen* brought items for the mini-auction; she auctioned some of her pottery. All went well at our meeting except that we still had too many members parked inside near the back door. <>

Announcements

- **Taxonomic Tidbits** - Read Mike's article on Page 4
- **Attendance Book** – Last month 30 people were counted but only 21 signed in. Two good reasons to sign in.... 1. Attendance is very important for a small club like ours to remain. 2. That's how you are noted for Participation Rewards.
- **Participation Rewards** - This is a reminder that you will be rewarded for participation. Bring a **Show-N- Tell Plant, Raffle Plants**, and/or **Refreshments** and you will be rewarded with a Raffle ticket for each category. Also if you **donate an Auction plant**. We realize not everyone has pristine show plants but each of us certainly have unidentified plants that can be brought in.
- **LACSS Festival June 11 & 12** – Our president and board members are in the process of determining if it is cost effective for our Bromeliad Club to participate. The festival rates have increased for the facility rental and that is being passed on to all vendors. Unfortunately the LACSS Board members are all new and are probably not even aware that our club helped make the cactus club show and sale possible from the first year.
- **Opening & Closing SGC** – The SGC staff is unlocking the kitchen door only by 9:00am. It is our responsibility to make sure all doors are locked when we leave. Last month one of our members propped open the exterior door nearby the closet. I imagine that was done so they could bring in plants, which was okay but we must make sure that it is locked again before we leave. We should be concerned about the possibility of an outsider entering and doing damage after we leave our meeting. We need cooperation from all.
- **Happy Birthday for April** *Bryan Chan on the 1st, Chris Rogers on the 4th and Ray VanVeen on the 12th*
- **Update on the Live Art Nursery** - Larry and Natalia Tabling were scheduled to be evicted Dec. 2015. However with letters, emails, phone calls and help from the council office they were given a one year lease extension until Dec 2016. That is not much help but it does give them a little more time to find a new location.
- **Snail Mail or E mail** – If you don't have email you are missing out on very good 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 e-mail address to receive the newsletter or go online to check our webpage. sfvbromeliad.homestead.com <>

Ramblings about Better Growing The editor is looking for information from other members for this column. I'm sure some of you have some growing tips to share about what to do or what not to do; it can be 1 or 2 sentences or 3 or 4 paragraphs. Member contributions are vital to keep the newsletter interesting and our SFVBS thriving. Submit a bromeliad photo of a plant in your collection. <>

NOW IS THE TIME

TO continue your fertilizer program with the second number in the formula being higher than the other two. Phosphorus will induce your plants to set flowers. Fertilize once a month at ½ strength.

TO check your plants for scale and aphids. Dip or spray thoroughly in a solution of 1 tablespoon malathon in a gallon of water. Repeat in 10 days if the infestation is heavy.

TO remove spent and dried plants from your pots. Remove pups ½ the size of the mother. Reput for sale or trade.

TO watch watering program according to rain or warm weather.

TO clean tanks of rotting material and when you water, water a lot to wash the salts out of the cups and the soil.

TO check coloration of your plants; if colors are pale, move them into more light. Do not put Neoregelias in full sun. Move plants to sunny areas gradually to prevent sunburn.

NOW IS THE TIME was written and first published by ***Stan Oleson in April 1988; and published again in the South Bay Bromeliad Associates Newsletter prepared by Bob Wright in April 2007*** <>

Membership Dues - Pay at the meeting to: Joyce - Membership Chair

or Mail check to: SFVBS membership - P.O. Box 16561 - Encino, CA 91416-6561

Yearly Membership Dues \$10.00 for a single or couple

Please Put These Dates on Your Calendar

If there is rain please check **web page, email or phone messages** before leaving home for the meeting.

Sunday March 27, 2016	Happy Easter
Saturday April 16, 2016	Backyard Picnic, hosted by: <i>Bryan & Mary Chan</i>
Sat. & Sun. April 30-May 1, 2016	LaBallona Bromeliad Show & Sale
Saturday May 7, 2016	Speaker – <i>Bryan Chan</i>
Saturday June 4, 2016	Speaker – <i>Ray VanVeen</i>
Sat & Sun June 11-12, 2016	SFVBS Show & Sale w/ the Cactus Club
Saturday July 2, 2016	SFVBS Regular meeting - STBA
Saturday August 6, 2016	Speaker - <i>Andy Siekkinen</i>
Sat. & Sun. Aug 6-7, 2016	So. Bay Bromeliad Show & Sale
Saturday Sept 3, 2016	SFVBS Regular meeting - STBA
Saturday Oct 1, 2016	SFVBS Regular meeting - STBA
Saturday Nov 5, 2016	Speaker – <i>Guillermo Rivera</i>
Saturday Dec 3, 2016	SFVBS Regular meeting - STBA
Saturday Jan 7, 2017	SFVBS Regular meeting - STBA

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



Happy Easter



Taxonomic Tidbits – *What is a bromeliad? Part 1*

By Mike Wisnev, SFVBS President (mwisnev@sbcglobal.net)

San Fernando Valley bromeliad Society Newsletter –April 2016

This topic seems pretty basic. I have wondered about it since joining the club, yet avoided writing about it for two years. Why – I didn't find an answer, although I didn't actively search for one. When I started preparing to write this article, I still didn't find the answer.

How are bromeliads classified taxonomically? What are their closest relatives? I had no idea!



Picture 1 – is this a bromeliad?

The Basics. Our Club is an affiliate of the Bromeliad Society International (BSI). The BSI publishes the Bromeliad Journal, is responsible for the Bromeliad Cultivar Registry and has a great website that gives all sorts of information. One page is devoted to “What are Bromeliads?” The first two paragraphs say:

Bromeliads are members of a plant family known as Bromeliaceae (bro-meh-lee-AH-say-eye). The family contains over 3000 described species in approximately 56 genera. The most well known bromeliad is the pineapple. The family contains a wide range of plants including some very un-pineapple like members such as Spanish Moss (which is neither Spanish nor a moss). Other members resemble aloes or yuccas while still others look like green, leafy grasses.

In general they are inexpensive, easy to grow, require very little care, and reward the grower with brilliant, long lasting blooms and ornamental foliage. They come in a wide range of sizes from tiny miniatures to giants. They can be grown indoors in cooler climates and can also be used outdoors where temperatures stay above freezing. http://www.bsi.org/brom_info/what.html



Picture 2- not very different than Picture 1, is it? And you get a dried inflorescence. Looks like a dried bromeliad inflorescence, or am I trying to trick you! Or is it a double trick?

It goes on to tell you lots more – their history, uses, where they grow, and how they grow.. They have a huge geographical range throughout most of the Americas, and can grow in the ground, on trees or on rocks.

This is certainly a great answer, and probably the one almost everyone is looking for. Lots of other articles have similar answers, and more information, much of it quite interesting. But after searching a couple hours, I still didn't find the answer I wanted.

Reframing the Question. Actually, I am not really asking the right question. What I want to know is how I can tell if any particular plant is a bromeliad? If I hand you a plant, or 1000 plants, how can you tell if it is a bromeliad or not – not a guess, but pretty much a certainty. It might be very technical – maybe you would need a microscope. You might even need to be a botanist with a laboratory.



Picture 3 – are any of these bromeliads? From left, A, B, C and D.

Even after having written about ½ of this article, I hadn't found the definitive answer yet!. While bromeliad articles may tell you lots about bromeliads, they don't tell you how to determine if a plant is one or not.

Actually, that isn't quite true either. If you have a decent description, you might be able to conclude that a particular plant is not a bromeliad since it doesn't fall within the description. But if it fell within the description, you would know only that your plant had a very good chance of being a bromeliad – you still don't know what is unique to bromeliads, so other plants might fall within the description¹.

Is a picture worth 1000 words? This article will show pictures of some plants (usually not in flower, so it isn't really fair) that may or may not be bromeliads – what do you think? The answers are at the end of the article.

¹ This might not be altogether true. If you have a lengthy bromeliad definition, and you are sure your plant meets all of its components, it seems unlikely it isn't a bromeliad. But in most cases, you won't be sure about a lot of the components without dissecting the plant etc.



Picture 4 At the HBG Jungle Garden. You probably need a close up to know if some are or aren't bromeliads. The four at the bottom right are bromeliads: I don't remember about the others. I don't even remember where exactly I took the picture. But it might give a sense that it isn't always immediately obvious whether a given plant is or isn't a bromeliad.

Depending upon how familiar you are with bromeliads, you might feel you can pretty much always tell whether a given plant is or isn't a bromeliad.

I confess that occasionally I see a plant (usually not blooming) that I wonder about. Only after I look at the label, if there is one, am I sure. This happens sometimes at the HBG Jungle Garden. There are a couple reasons for my confusion, and for the same reasons, you might be surprised that even though you know a lot about bromeliads, sometimes you aren't sure either.

First, very few of us are familiar with all the kinds of bromeliads. Some genera aren't in cultivation or at least are rarely seen. What about those – how confident are you that you can tell whether species in these obscure genera are bromeliads. In fact, many of these are more ancestral forms, and thus may look a bit different than those we normally see. Obviously, if you are familiar with the plant, you will know. But if you aren't?



Picture 5 – is this a bromeliad?

There is another issue – what other families have species that look like bromeliads. Apart from bromeliads, cacti and succulents, I know pathetically little about plant genera and species. I haven't been to South America, or many jungle habitats. Without this kind of knowledge, it is hard to really know how well you can look at a plant and know if it is a bromeliad.

I would guess the answer to the last paragraph is that there aren't very

many look-alikes. We have seen a lot of programs with habitat plants and I don't remember folks showing pictures of plants that looked like bromeliads that weren't. But there were lots of unidentified plants that seemed to be bromeliads – maybe they all weren't.



Picture 6 – is this a bromeliad?

Finally, even if you do qualify for the “I know one when I see it” club, can you tell me in words. Bromeliads are pretty diverse plants. Consider a red banded *Billbergia*, a green leaved *Tillandsia* and a silver *Dyckia*. What features do they have in common? They all have leaves and flowers, that is probably true of most plants, though certainly not all. It’s not so clear – of the three, one is a tank top, two have spines, two bloom from the center, and they all have different kinds of fruit and seeds. What combination of features do they share that non-bromeliads don’t have? More precisely, what distinguishes bromeliads from all other plants?



Picture 7 – is this a bromeliad? Looks pretty much like the plant in the middle of picture 3.

Do bromeliads have unique features? Well the answer is yes, but it took me a long time to find out what. To keep you reading, I am not telling you now.

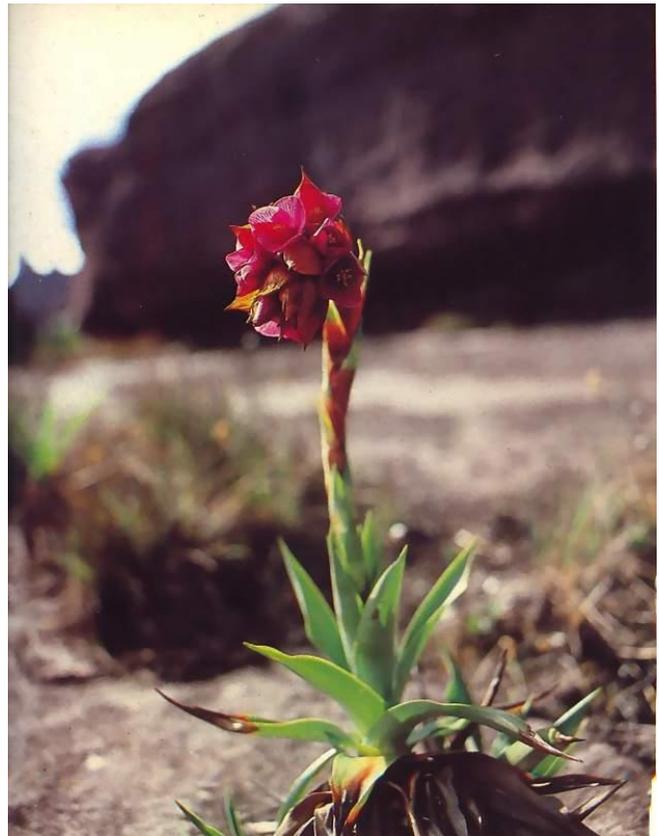
Almost every scholarly article about families or genera starts out with a bit of a description about the family etc. bromeliad articles do the same. But many other articles then go on to say that this taxa is “distinguished” by the following features. Indeed, many articles about bromeliads will tell what distinguishes one subfamily from another, or one genus from another.

But bromeliad articles don’t tell you specifically what distinguishes bromeliads, or if they did, I missed it. In contrast, most cacti articles will tell you that cacti are distinguished by various unique features, including short shoots that are modified into areoles. So once you know about areoles, you can identify what is and isn’t a cactus.

Picture 8 – what about this one - you get to see the inflorescence.

So what in particular distinguishes bromeliads. I looked at a lot of scholarly articles that dealt with bromeliads in some fashion, and didn't find an answer. Similarly, Smith & Downs doesn't seem to have it – though at over 2000 pages it may be in there and I didn't find it. It does have a description bromeliads, as do many other books. So, I have no doubt that the answer is one or more of the the features in these technical descriptions. But without looking at all the other descriptions of the other families, and comparing them, you can't tell what is unique to bromeliads.

Actually, it turns out that this isn't so unique about bromeliad articles. Articles on higher level groups are much less likely to describe the unique features. seems that the smaller the group, the easier to identify unique features. One major paper said the focus has been on plant families since the next higher group, called orders, often were “morphologically unrecognizable or ... lacking any evolutionary coherence.” An ordinal classification for the families of flowering plants. *Annals of the Missouri Botanical Garden* 85: 531–553



of

It



In any case, the easiest way to find this type of answer is to find a key, but I haven't found one on point. They are no doubt out there, but it looks like they are in books that aren't on the web, and I am not buying them simply to find my answer. But I did learn a lot about how bromeliads are classified in comparison to other plants, and will share that. Note that I haven't researched this much, so some of the information may be out of date, and there may be a lot of disagreement of which I am completely unaware!

Picture 9 – is this a bromeliad?

Classification of bromeliads. Traditionally, pretty much all organisms have been classified into various groups based on a classification set up by Carl Linnaeus in the 1700's. You might even remember it from school – there were three kingdoms, which were broken into divisions, then classes, then orders, then families, then genera and finally species and perhaps subspecies.

The rest of this article is different than almost all the others. The others all basically start with bromeliads and go to lower levels. For example, bromeliads are a family of various genera; the technical family name is *Bromeliaceae*. When you see a name like *Aechmea recurvata*, *Aechmea* is the genus, and *recurvata* is the species. The species and genus names are italicized, and the genus is capitalized. Sometimes a family is divided into subfamilies; traditionally there were three subfamilies for bromeliads, but based on DNA studies it seems there are eight.

In contrast, this article looks at the classifications above bromeliads. How do bromeliads fit in the big picture? Hopefully, some of you will find it interesting, even if a lot of it doesn't really address bromeliads.



[Picture 10](#)– is this a bromeliad?

Kingdoms. Let's start at the largest groups and work down. Obviously, bromeliads are in the plant kingdom. As best as I remember from school, there were three kingdoms – plants, animals and protists – those microscopic organisms you see only with a microscope.

Well, we all know the difference between plants and animals, so no need to address that. Wait – is that true? If you asked me before I looked, I probably would have answered that plants have chlorophyll and produce energy through photosynthesis. But what about mushrooms – aren't they plants?

Like many other taxonomic issues, sometimes it isn't clear where to draw the lines between different kingdoms. Now there are five or six kingdoms, and there might be more. The simplest life forms are one celled organisms that don't even have a nucleus. These are in the Monera kingdom that include bacteria and cyanobacteria, which are sort of like bacteria but engage in photosynthesis, although it is a different process than used by plants. This kingdom also includes archaeobacteria which are one celled organisms that don't need oxygen, and lived in hot springs or acidic conditions. Some put archaeobacteria in a different kingdom.



Picture 11 – is this a bromeliad?

Second, the Protista kingdom includes one celled organisms that have a nucleus. Most botanists also include algae which clearly use photosynthesis. However, their reproductive system differs considerably from that of plants.

Third, mushrooms aren't in the plant kingdom. There is a kingdom called Myceteae for fungi, which seems to be multicelled organisms that don't have chlorophyll and have chitin in their cell walls.

Animals are multi-celled organisms whose cells have a nucleus but no chlorophyll or cell walls.

Finally, while not entirely accurate, plants are multi-celled organisms that have a nucleus and chloroplasts as well as cell walls containing cellulose.

According to the The Plant List, which is a collaboration of Royal Botanic Gardens, Kew and Missouri Botanical Garden, there were 350,699 accepted species names as of October 2015. <http://www.theplantlist.org/>. According to this listing, about 1% (3320 species) are bromeliads. The bromeliad Taxon List lists 3485 valid species. <http://botu07.bio.uu.nl/bcg/taxonList.php?>

According to the The Biology of the Bromeliads (1980), bromeliads are in the subkingdom Tracheophyta, which includes all vascular plants. Without getting more technical, you might think of vascular tissue as the arteries and veins of plants. The actual terms are xylem and phloem, and they carry fluid and nutrients inside the plants. But some plants don't have them, like mosses and liverworts. Note that the *Tillandsia* known as Spanish Moss is not actually a moss, and it does have vascular tissue.

I have heard lots of folks ask if various plants (often Lithops) have flowers. And others respond that all plants have flowers. Well, that answer is wrong. Non vascular plants (known as Bryophytes, which include mosses and liverworts) don't have flowers. Roughly 10% (34,556) of the accepted species are non vascular plants.

Division. Some vascular plants, like Pteridophytes (ferns and related groups), don't even have seeds, let alone flowers. There are 10,622 plant species in this group without seeds .



Among those with seeds, some have flowers, and some don't, like pine trees. Vascular plants with flowers, including bromeliads, are called angiosperms (which was called the Magnoliophyta division of the plant kingdom). Those that don't have flowers are called gymnosperms. According to The Plant List, there are 304,419 accepted species of angiosperms and 1104 accepted species of gymnosperms.

Thus, next time someone asks you if all plants have flowers, you can respond that, at least as of October 2015, 14.2% of the 350,699 accepted plant species, roughly 1 in 7, don't have flowers.

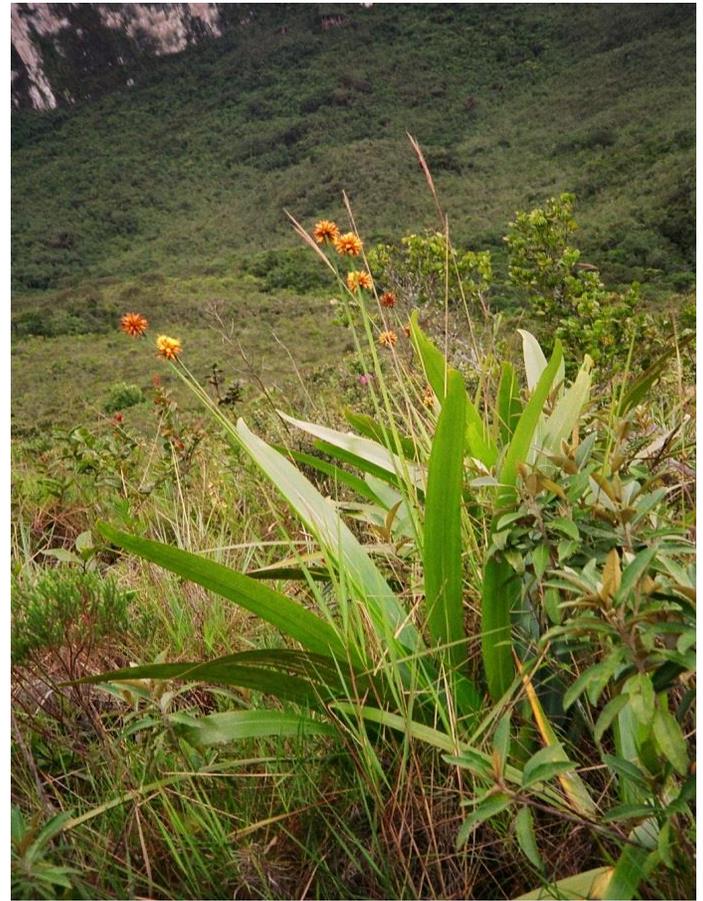
Picture 12 – is this a bromeliad? Not like any I have seen!

Class. I have read more than once that angiosperms are divided into two groups – monocotyledons and dicotyledons. This is actually a pretty important distinction, especially if you are into cacti and succulents. Basically, when an angiosperm seed germinates, the seed puts out either one or two leaf-like structures called a cotyledon. If there is one, the plant is a monocot. The Liliopsida class includes all monocots. If there are two such leaf-like structures, it is a dicot.

There are some important differences between the two groups. For example, monocots have flower parts divisible by three, that is they have 3, or 6 or 9 petals etc. Dicot flowers have 4 or 5 parts, or multiples of them.



Picture 13 – is this a bromeliad?



Picture 14 – is this a bromeliad?

I will tell you that only one of the plants in Picture 13 and 14 is a bromeliad!.

Every bromeliad flower has three petals and three sepals, unless it is an aberrant plant. From that alone, you know they are monocots. Every plant pictured in this article is a monocot. According to a 2010 study cited below, there are about 65,000 monocot species. This class includes palms, orchids, irises, onions, asparagus, yams and seagrasses, in addition to every group named in the rest of this article. Roughly 5% of these are bromeliads.

All cacti are dicots. Succulents can be either dicots or monocots– there is no taxonomic group that just includes succulents. Rather it consists of all sorts of unrelated families and genera that have independently evolved to store water etc to live in harsh environments.

Another important difference is that the vascular tissue of dicots is bundled in a ring in the middle of the stem. Those in the cacti hobby are familiar with this if you have cut open a plant. In contrast, in monocots the vascular tissues are spread out throughout the plant.

This seems like a good place to stop for now. The rest is in another article. In the meantime, how well did you do in telling which plants are bromeliads. Here are the answers.

1 - bromeliad – unidentified *Puya*

2 not a Brom. *Nolina longifolia*.

3 bromeliad – A is *Yucca elephantipes*. B is *Puya mirabilis* (large clumps in middle of photo) . C, ?, not a bromeliad. D is *Beaucarnea inermis*.

4 The four at the bottom right are bromeliads: I don't remember about the others. .

5 not a Brom. *Callisia fragrans*? I thought this might be a bromeliad when I got it at a cactus club.

6 bromeliad – *Acanthostachys strobliacea*.

7 not a Brom –?

8 bromeliad - *Connellia augustae* Unknown photographer.

9 - not a Brom – *Bulbine alooides* .

10 bromeliad - *Areococcus micranthus*, photo in Die Bromelie 2005(1) 25,.

11 not a Brom – *Furcurea* species growing on my street.

12 bromeliad – *Pitcairnia oblongifolia* . Photo by Ing. Alexander Hirtz

13 bromeliad – *Brochinia acuminata*, photo by M Asmuss.

14 not a Brom. *Stegolepis guianensis* by Christian Hummert (Ixitixel) –



Taxonomic Tidbits – *Yellow/green petalled Billbergia - Part 3 (B. amoena and B distachia; observing and labelling your plants.)*

By Mike Wisnev, SFVBS President (mwisnev@sbcglobal.net)

San Fernando Valley bromeliad Society Newsletter –April 2016

Part 1 discussed *B amoena* at length including some unlabeled plants. That species usually has yellow green petals and sepals, each with blue tips. Below is another unlabeled plant I saw that intrigued me. It isn't mine, so I don't have more pictures but it has yellow green petals and sepals, each with blue tips. So I figured, most likely another *B amoena* variety.



Unlabeled *Billbergia* 3A-



Compare that picture with this **unlabeled *Billbergia* 1A** that I think is likely *Bill. amoena*. How different is it? Not really a fair question from a single photo. But I will tell you the colors of the scape bracts petals and sepals are the same for each. Each of us may have a different answer, depending on expertise, time in the hobby and how well you observe its features.

To identify a plant, details are critical, and I confess I don't observe them very well. It isn't a matter of sight, but rather not really observing much more than general size, shape and color. What differences do you see? In any case, this is one problem in identifying plants

So I posted the first picture, and was told it might be *B distachia*, a plant I wasn't very familiar with.² That really wasn't surprising; as of December 3, 2015, the bromeliad Taxon List lists 65 *Billbergia* species and FCBS lists 427 *Billbergia* cultivars.

As an aside, the many cultivars are a real problem for identifying bromeliads, as opposed to cacti. In general, there aren't many cacti hybrids, so if you can match your cactus to a given species or have a monograph, you might well successfully identify your plant. You could, in not all that much time, look through all the species shown on BCR and try to match your plant, but going through 427 cultivars is another matter. Moreover, there are probably more than another 400 hybrids not shown on BCR or FCBS.

But back to *B distachia*. Despite the fact that none of the literature seems to mention its similarity to *B amoena*, it seems rather similar to me. Its petals and sepals both are yellow green with blue tips, like *B amoena*. One variety, var *straussiana*, has blue tipped sepals, but the petals are all green (like *amoena* var *viridis*.) Var *concolor* has all green sepals and petals. One

² When I asked Derek about some aspects of these articles, he told me that Margaret, his wife, thought the plant might have links to B Purple Haze, a *distachia* cultivar with similar leaves. She is quite a bromeliad aficionado as well. There is also a nursery plant named *distachia rubra*.

variety is yellow spotted – var *maculata*. It has a large distribution in Brazil, generally the same as *B amoena*. Nonetheless, given the lack of any comparison in the literature, any apparent similarity of the two species is most likely due to my ignorance of their salient features.

So what is different? Smith’s key reveals *B distachia* has a decurved inflorescence, while *B amoena*’s is erect or ascending. Rather obvious from the pictures above, but did you notice it? Even if you did, did you know (or wonder) if that difference might matter? And, if you have read Part 2, you might recall that *B. amoena* var *carnea* seems to have a decurved inflorescence.

You might also notice the rosette of the first is fatter than the slender rosette in the second picture. Does that matter?

Let’s compare the descriptions in Barros & Costa, for State of Rio de Janeiro, Acta Bot. Bras. 22(4): 1172-92. 2008 (translation by D Butcher).

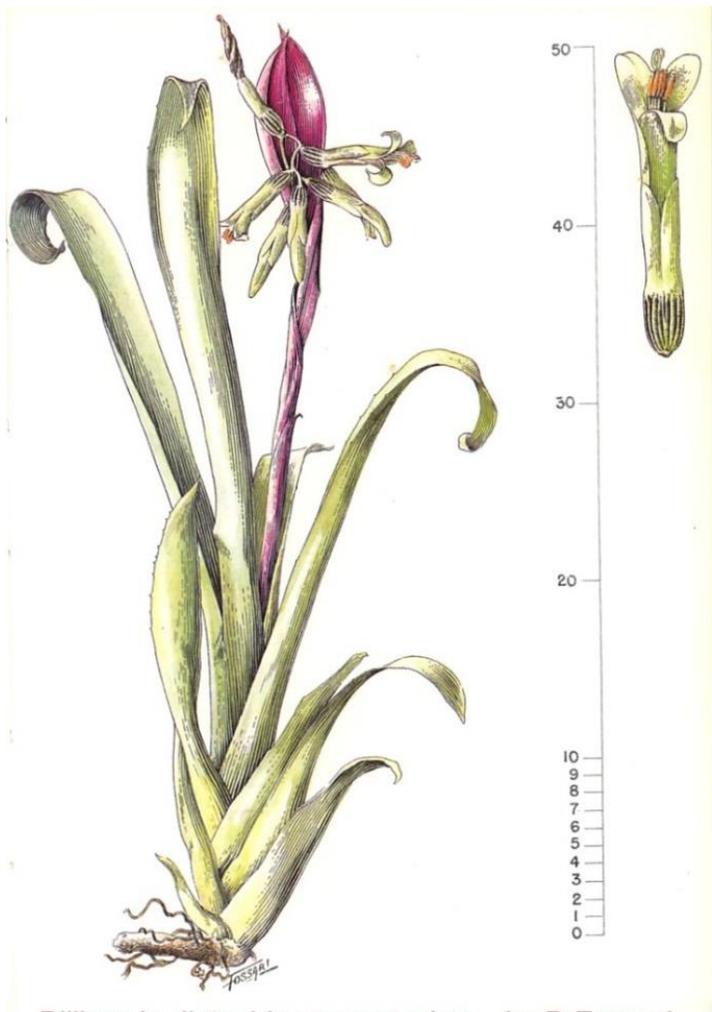
“*B distachia*. “The species characteristics are a rosette with few leaves, with silvery indument on the abaxial face, scape and rachis with reduced width, scape bracts imbricate, with the base completely enclosing the scape, inflorescence a few flowered spike and lax, lower floral bracts different from the scape bracts, flowers sessile to subsessile, spreading, zygomorphic and ovary strongly sulcate.”
Backup



Billbergia distachia* var *straussiana Photo by: Ludwig

***Billbergia amoena*.** “The inflorescence with lax flowers, scape and primary bracts elliptic to wide elliptic, the rachis and scape glabrescent and exposed, the long sepals and the cylindrical and sulcate ovary are characteristic of the species. However, it is a polymorphic species, especially in the form of the rosette, in the morphology of the leaves and the inflorescence, and in the colouration of the sepals and petals.”

One obvious difference is that the peduncle of *B distachia* is covered with bracts, while that of *B amoena* is exposed. Frankly, I have no idea how many of my *B amoena* plants had an exposed scape, but I can say the plant in the second picture above does since it is blooming right now. The picture doesn’t show it, however, revealing one more problem with working with photographs as opposed to the plants themselves.



Billbergia distachia var *concolor* by D Fossari

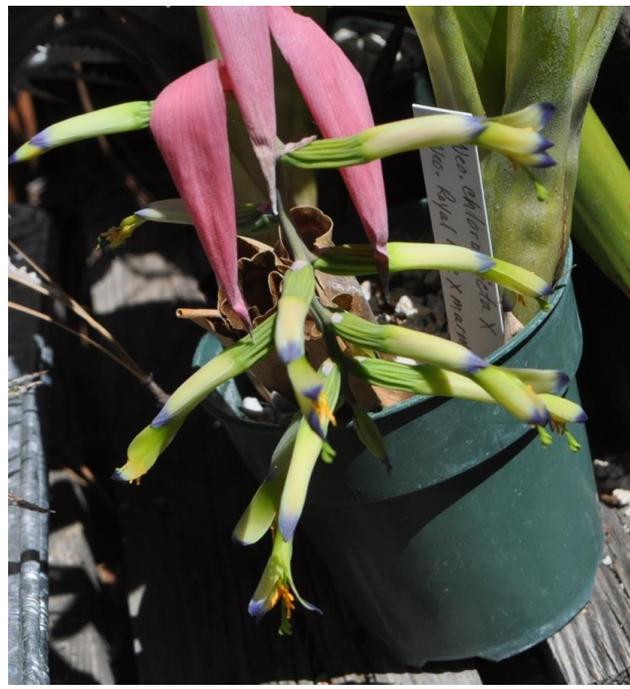
Maybe another picture will help. Well, not much! This one doesn't even have a decurved inflorescence. It does have imbricate scape bracts covering the scape, and thankfully doesn't have blue tips in either the sepals or petals; it seems all varieties of *B amoena* have blue tipped sepals (or red ones).

At this point, there isn't much one can do other than ask an expert, or compare the descriptions of two species.

Frankly, this is rather painstaking work given the terminology. But here are some differences taken from the descriptions in Barros & Costa.

Because the same authors do both descriptions, the comparison is much easier than many other cases.

	<i>Billbergia amoena</i>	<i>Billbergia distachia</i>
rosette	funnel shaped	tubular
Leaves	10-18 green or wine coloured, abaxial face with traverse bands white lepidote or not	5-10 silvery lepidote on the abaxial face
Spines	0,5-2 mm	entire or with spines 0,2-1 mm
Scape	erect to suberect, 20-36 cm	pendant, 34-47 cm
rachis	Not geniculate green, rose or red	geniculate white or rose
Flowers	suberect, sessile actinomorphic or zygomorphic	spreading, pedicel 1-2 mm zygomorphic



Above is **B 'Smokey Rose'** listed in FCBS as “cv. of old unknown *distachia* species? hybrid?”

Summarizing the above info, as compared to *B amoena*, it seems *B distachia* has less leaves, less spination, often less leaf markings, a drooping longer inflorescence, and spreading slightly pedicellate flowers. Derek also pointed out another difference, which is that *B distachia* is known for its very furrowed ovary. Look at the pic above on the right, and see how furrowed (sulcate) the ovary is.

Back to another question – assuming you care about labels, should I, or you, label your unlabeled plants? Based on the above, it seems safest to say, generally no, or only with the utmost caution, and even then probably by indicating the name with a ? after it to reveal potential uncertainty. If you are really serious, you might try to find out where it came from, and whether they had the plant you think it might be. You could also dissect the flower and see if it matches the botanical description. Even then you probably can at best say it seems to match a certain species very well. If the plant is a hybrid, you might, with enough experience, see certain features that suggest one of the parents.

I could expand on this at length, but will limit my comments to one semi-related point that frankly didn't occur to me for a number of years. Plants don't grow with labels! So who did label your plants? Did you get your plant directly from Elton Leme, or someone who got it from him? Frankly, except for a few plants from the HBG and Pam Kioides, almost none of my bromeliads plants have any data associated with them. Having been in the cacti and succulent hobby for a decade, I can safely say a lot of nurserymen put names on their unlabeled plants –sometimes they know right off, but other times they flip through the same books you or I look at and find what they think it is. They are probably usually correct, but Then think about how often someone has asked for an ID at a Club meeting. Did they end up labeling the plant? Is it even remotely likely that an ID might be right without an inflorescence?

So perhaps the better question is whether you should rely on the plants with labels! My view is to trust but verify – that is, when it blooms check it out on BCR or FCBS and see if it matches. This isn't a guaranty, but at least provides some degree of assurance that the label is, or isn't, right. ◇

BACKYARD BAR-B-Q PARTY

SATURDAY APRIL 16, 2016

hosted by: Bryan and Mary Chan

10571 Odessa Avenue Granada Hills, CA 91344

405 FWY to Devonshire; go west on Devonshire;
Turn right (north) on Hayvenhurst Ave. for 2 blocks;
Turn right (east) on San Jose St.
Turn left (north) on Odessa.

10571 is on the left at the end of the cul de sack.
If necessary you may call Bryan for directions **818-366-1858**

Bryan bcbrome@aol.com

Mary mchan2001@aol.com

12:30 - *Guests are invited to view Bryan's plant collection*

by 1:30 - *Deliver all pot-luck food*

2:00 - *Pot Luck Lunch served*

We need your help to put together a list of pot-luck dishes. Please call or E-mail Mary Chan with your pot-luck contribution, so we won't have all pasta or ½ dz. cream pies. Listed below are a few dish suggestions based on previous events. Call if you need a suggestion. You are welcome to bring your favorite drinks of soda, beer or wine.

Pot Luck Ideas

Asst. Fresh Fruit -
Asst. Cheeses -
Chips & Dip -

Tri Tip -
Chicken -
Hot Links -
Ribs -

Mac & Cheese -
Baked Beans -
Corn casserole -
Green Vegetable -
Potato Salad -
Sweet Potato Cas.
-
Vegetable Salad -
Green Salad -
Cole Slaw

Bread & Butter -

Baklava -
Pie -
Cake -
Ice Cream -

Sodas -
Water -
Beer & Wine - BYO

