

S.F.V.B.S.

SAN FERNANDO VALLEY BROMELIAD SOCIETY

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NOVEMBER 2013 NEWSLETTER

OFFICERS

Pres: **Mike Wisnev** V.P. & News: **Mary K. Carroll** Secretary: **Kathleen Misko** Treasurer: **Mary Chan**
Membership: **Nancy P.-Hapke** Health & Wellness: **Georgia Roiz** Web Page: **Kim Thorpe**
Directors: **Steve Ball, Bryan Chan, Richard Kaz -fp, Dave Bassani-fp**

next meeting: **Saturday Nov. 2, 2013 @ 10:00 am**
Sepulveda Garden Center 16633 Magnolia Blvd. Encino, California 91316

AGENDA

9:30 – SET UP & SOCIALIZE

10:00 - Door Prize – for members who arrive before 10:00 / Please Sign In

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

10:15 - Speaker: Kim Thorpe

Topic: “Bromeliads of Oaxaca Mexico part I”



This digital photo presentation will cover a trip earlier this year to Oaxaca. We will see photos of many different plant families as well as some of the culture she experienced. She is still learning about Bromeliads so feel free

during the presentation to help with plant names.

Kim is a native of Kailua, Hawaii; there she attended the same Punahou High School where President Obama was also a student. She resided in northern California before moving to the Los Angeles area where she is employed in the movie industry. Her interest in plants grew after meeting Artie and it was our lucky day when Kim became interested in Bromeliads; she contributes so much to our club. Kim is a quick study, still learning about Bromeliads and Succulents and continues to improve her personal collection.

11:00 - Refreshment Break: Will the following members please provide refreshments this month: **Mary Chan, Nels Christianson, Roger Cohen, Mohamed, Larry Farley, Bob Friedman** and anyone else who has a snack they would like to share. (continued next column)

If you can't bring anything this month don't stay away, just contribute next month.

Questions about refreshments? Call Mary K. 818-705-4728, leave a message, she will call back.

Feed The Kitty-help support our refreshments

11:30 - Show and Tell – Please bring one plant.

11:45 – Mini Auction: members contribute

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

12:30 – Pick Up around your area /

Meeting is over—Drive safely <>

Novice Corner – Last month I gave a tip to soften potting soil, I'd like to add to that info. Most of us have experienced a potted plant that became too dry; so dry that the soil was hard as a rock. At a recent LaBallona Bromeliad meeting Tom Rozell shared a landscape

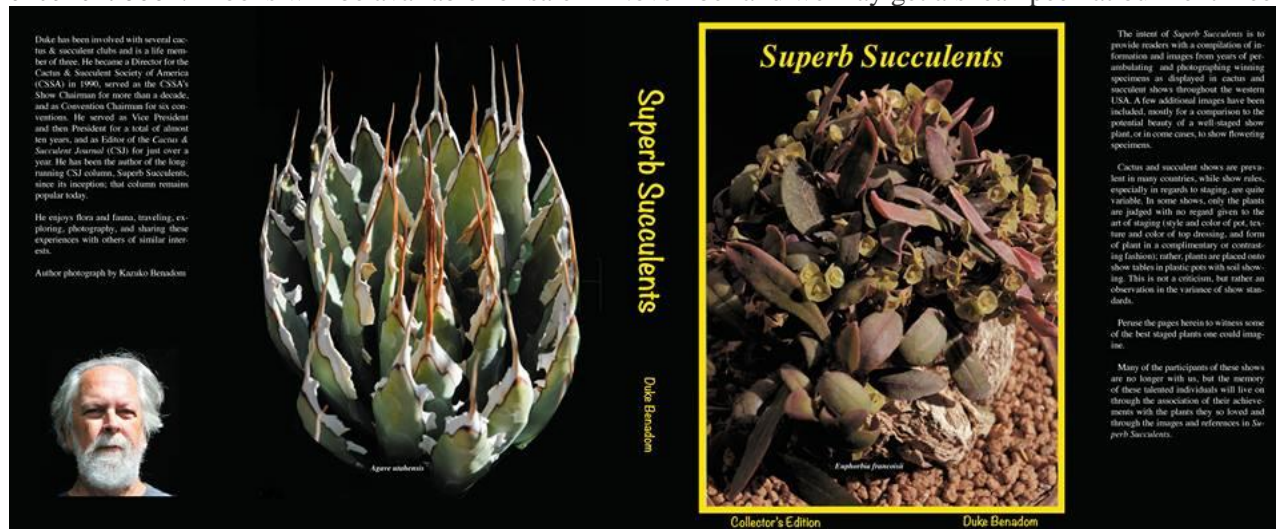
maintenance tip with the group. Palmolive dish soap will soften the soil. I tried it and it worked. I put a few drops of Palmolive in a glass of water and poured it into the pot. I had too much water so I just poured the remainder into the plant's saucer. The plant is still alive and the soil is soft. Another person suggested that I might want to follow up by flushing the plant with clear water. I thought it was a good idea, so I did it. A month later, my two test plants are alive and doing just fine. Tom also said he has used undiluted Palmolive around trees.

maryk <>

TAKING A LOOK BACK at our... October meeting, it was another good one, well attended with good food, good people and good vibes. Guillermo Rivera was our speaker and he gave us a great presentation. We enjoyed him and he seemed to enjoy us; he stayed for the entire meeting. There were several plant related events going on around town that same day and our attendance was still good. Guillermo paid our group several nice compliments. He said our Show-n-Tell featured the best collection of terrestrial that he had seen around the country. He also complimented on our refreshments as the best he had experienced at meetings around the country. He thought we had a fun auction and great raffle plants; he even drew the raffle tickets for us. If you missed his program this year, he promised to be back in 2014. <>

Announcements:

- **New Book** – SFVBS member, Duke Benadom, has published a book, not about Bromeliads but nevertheless an excellent book. Books will be available for sale in November and we may get a sneak peek at our next meeting.



- **Holiday Brunch** - Please put this date on your calendar. **Saturday Dec 7, 2013** at the Sepulveda Garden Center 10:00am start with Holiday Lunch and gifts at noon. Detailed information will be posted closer to the date. Set up and decorate on Friday Dec 6. I need one SFVBS volunteer to help. I will be there from 10:00am - 2:00.
- **Lost Black Jacket ?? – Did you lose one at the Sept. meeting?** I will bring it to the November meeting.
- **California Association of Nurseries and Garden Centers (CANGC)** – Several members from our group attended the auction; it was a great event on Wed. Oct. 23rd. It is my understanding that this auction has been going on for several years around the same time of the year. Trust me, it is well worth attending and the money benefits the local school horticulture programs. Next year we will get the word out to you earlier so you can plan to attend. Steve List is the agricultural instructor at Sylmar High School and President of the CANGC; he did a great job.
- **No November Birthdays ??**
- **The 2014 June show** may be moved back or forward a week. We will keep you updated.
- **TIME TO RENEW..... Yearly Membership Dues \$10.00 for a single or couple**
Please pay 2014 dues at this next meeting - see Mary Chan

SFVBS Regular meeting Schedule

Sat. - Dec 7, 2013	Meeting and Holiday Brunch 10:00 – 2:00
Sat. - Jan 4, 2014	Meeting will be coordinated with Rose Pruning Speaker to be announced, any suggestions?

Support our local **Bromeliad Nursery** Live Art Plants -18809 Plummer St. - Northridge, CA 91324

Last month I said Mike deserves a Special Thank You for his research and great Taxonomic Tidbits. Mike has done it again; part II of his article about Hechtias and Dyckias. The 10 page article begins on page 3. Mike is open to comments in person or by e-mail (mwisnev@sbcglobal.net)

Taxonomic Tidbits

Dyckia, *Hechtia* and their Flowers II

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

San Fernando Valley Bromeliad Society Newsletter –November 2013

Last month, I focused on *Hechtias* and their flowers; this month I will focus on *Dyckias*. In general, *Hechtia* flowers they are small and white, while *Dyckias* generally have orange or yellow flowers that are a bit larger.

Corrections. Before starting the new article, I should note correct two errors in Part I published last month. At the outset, I encourage you to point out any errors in the articles. I am really not much more than a novice about Bromeliads, so I try to be careful about what I state, and not say something I don't know is true, at least based on the materials I have. In particular, some of the information in these materials may be outdated, and I may not know that new information has shown a contrary conclusion. This is the case with the second error below. So I would be happy to learn about the info. In other cases, like the first error below, well I was just wrong!

I am embarrassed about the first error, since I knew it was wrong before the article went out, and we actually briefly discussed it at the meeting. For those of you at the meeting, I brought in *Ochagavia litoralis* in bloom. In the last article, I stated that *Ochagavias* are in the Pitcarnioideae sub-family (they certainly look like they belong!). They are actually in the Bromelioideae sub-family, which includes *Neoregelias*, *Aechmea* and *Billbergias*. The Pitcarnioideae sub-family, as traditionally described, includes *Dyckias*, *Hechtias* and *Puyas*, and is characterized by winged seeds. (The study I noted last month broke the latter two off into two new sub-families). However, *Ochagavias* (and *Fascicularias*, which are closely related) do not have winged seeds and are not part of the Pitcarnioideae sub-family.

Second, I showed some pictures of *Hechtia elliptica* and later learned it was recently referred to *H texensis*. It is often hard to tell whether two similar looking plants should be treated as one or two species in a genus. This problem is a lot worse for *Hechtia*. Because male and female inflorescences and flowers can look different for the same *Hechtia* species, male and female plants have sometimes been treated as different species until they are studied in more detail. That was the case with *H elliptica* according to one article. Another plant in the trade, *H scariosa* was also transferred to *H texensis*.



***Dyckias*.** While we usually see a single head or small clump at our club meetings, they can form large clumps. For example, here is *D pseudococcinea* with its orange flowers at Huntington Botanic Garden (HBG).

Currently, there are about 160 species of *Dyckias*. Most are in Brazil, centered in the Minas Gerais area. They also grow in Argentina, Bolivia, Uruguay and Paraguay. About one-third of them are only known from one location. DNA work on them is just beginning to find appropriate genetic markers to potentially distinguish species.

Dyckias have lateral inflorescences – that means they grow out of the side of the plant. In contrast, most Bromeliads have terminal inflorescences, which mean they grow out of the center of the plant like. While some *Dyckias* were described with terminal inflorescences, the leading expert on *Encholiriums* transferred these to *Encholirium* in 2001. Some *Hechtias* have terminal inflorescences and others have terminal ones.

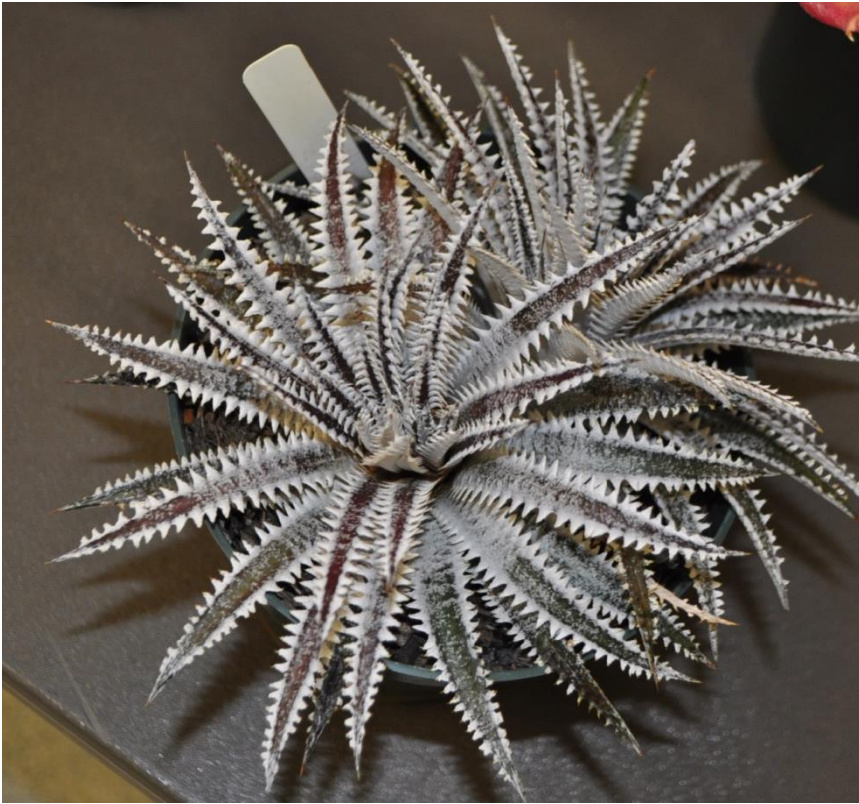
Comparing some *Hechtias* and *Dyckias*. I mentioned before that some *Hechtias* and *Dyckias* look very similar and are very hard to tell apart. Compare the picture above with the picture of *H. konzattiana* below, collected by Bill Baker in Oaxaca.



Without the flower (and the labels), do you think you'd know one was a *Dyckia* and the other a *Hechtia*? Some would, though I am not sure they could describe the difference. If you think you know the difference, what do you think the below is? If you think you know, give me an email to confirm – I'd also be curious what made you think as you did.

mwisnev@sbcglobal.net





Of course, most are a lot easier to tell apart, especially the hybrids. Here is a lovely **D 'Winter's Frost'** at one of our meetings.

Dyckias can also add quite a bit of color to your collection.



Flowers. *Hechtia* flowers are “functionally unisexual.” Each plant has only male or female flowers - thus, *Hechtia* are dioecious. In contrast, *Dyckia* flowers are perfect – each flower has both functioning male and female parts.

One study, almost a century old, found that about 72% of 120,000 flowering plants had strictly bisexual flowers, like *Dyckias* and most other Bromeliads. Only 10-11 % had strictly unisexual plants – of these, about 7% were monoecious, and 4% dioecious (like *Hechtias*).

You might notice that the numbers above leave almost 20% unaccounted for. These fall in the broad “other” category. Nature is incredibly diverse, and there are all sorts of variations. In fact, two *Dyckia* species fall within this group - *Dyckia maritima* and *selloa*. Smith & Downs report that these plants have both perfect and unisexual flowers. No clue if any particular plant has perfect and male and female flowers, as opposed to perfect and male or perfect and female. It might take some doing to find out – here, to the right, is *D maritima* in flower at the HBG.

I also saw one article that said one *Hechtia* species (it didn’t say which one) is “polygamomonoecious.” This means the same plant has bisexual, male and female flowers; the term “polygamous” is more commonly used. I later learned that *H gayii*

(shown in last month’s article) is the species – it has female flowers below, male flowers above, and perfect flowers toward the center of the inflorescence. I also learned the correct name is now *H gayorum* – since Ed and Betty Gay found it the name has been made plural, rather than singular.



Is there anything unique about the typical *Dyckia* flower? Here are various views of a flower (or parts of one) of *Dyckia rarifolia*.



The picture on the left shows the pistil and stamens while looking into the throat of the flowers. You can see it has three petals. There are also three sepals and three flower bracts. The two flowers above it in the same picture show the bracts, sepals and petals. Note how the petals start out as a tube covered by the sepals and then broaden out.

All Bromeliads have three petals and sepals and pistils etc. But Bromeliads have six stamens. This is often referred to as a double whorl of stamens. Bromeliads are monocots and all monocot flowers are trimerous. This means each flower has three flower bracts, three sepals and three petals (or some multiple of 3 for each).

For the next two pictures below, I peeled off the sepals and one petal. The first picture shows the remaining flower, and the second shows the peeled off petal. The key here is that while the stamens are not connected to each other at the top of the flower, the six stamens are fused together at the bottom, and they are also fused to the interior of the petal claws.



Dyckia flowers are the only flowers in the Pitcairnioideae subfamily with this feature. For others, the filaments are not fused together like this, though in some cases individual stamens may be fused to one petal. The Smith and Downs key for this subfamily separates *Dyckia* from all others in part as follows: “Bases of the filaments forming a tube and adnate to the petals.” Almost completely readable! Adnate means firmly or wholly attached. The actual description of *Dyckias* states the filaments are basally connate, which is the technical term for forming a tube or connected. Interestingly it doesn’t mention they are adnate to the petals.

I have no idea if this feature aids the plant in any particular way. Various flower features often aid in pollination. In particular, the shape, and color and smell may draw a particular pollinator, like birds or insects that may see certain colors better than others. Recall also that different subgenera of *Tillandsias* vary considerably regarding stamen length – this also may draw different insects. Night blooming plants are often white and scented- there is no need for other colors since it is too dark, and the scents draw moths or bats. I saw a picture of one flower (not a bromeliad) under ultraviolet light that looked completely different (and stunning) than under visible light – apparently ultraviolet light is visible for its pollinator. But connate and adnate filaments – who knows? Maybe it keeps the nectar in the flowers.

As noted above, Bromeliads always have 3 petals and 3 sepals etc. For plants that aren’t monocots, the number of parts to the flower sometimes differs for genera in a family, or even for different species in a genera (but not Bromeliads which always have 3). I don’t know if this is true for some monocots – that is, do some genera in a family have 3 petals, while others have 6? Also, many genera of plants have this double whorl of stamens.

[As an aside, for those of you who like Crassulaceae, one way to distinguish some genera can be by counting flower parts. For example, a *Kalanchoe* flower generally has 4 petals (and 8 stamens), while an *Adromischus* has 5 petals (and 10 stamens). In contrast, *Crassulas* can have 2 – 12 petals, but are one of the few genera in the Crassulaceae family with a single whorl of stamens. Surprisingly, *Graptopetalums* generally have a double whorl, but one has a single whorl. They have very pretty (and unusual) flowers, though not often collected. ***Graptopetalum macdougallii*** (10 stamens) and ***Graptopetalum pentandrum*** (5 stamens) are shown below.]



Spines. *Dyckia* (and *Hechtia*) spines are fascinating. The size and shape can vary a lot, and the contrast between the color of the leaves and the spines can be lovely. Here is one called **D ‘Red Ripper.’**



Here is an interesting one – just
labeled **Dyckia purple spines**.
Quite unusual.



A few *Dyckias* don't have spines. Some of you may remember John Martinez brought in a nice sized clump of **D 'Nude Lady'** (sometimes called '**Naked Lady.**') I have a small pup of one, in a 3 inch pot. Imagine my surprise when I encountered this one at HBG!



More on flowers. Finally, I'd like to point out one more feature of the flower, though it is not unique – in fact, it may be true of all Bromeliads. I noted above that flower parts come in threes for Bromeliads (and six for stamens). Most are easy to count. But, when you look at the flower, you only see one style and often only one stigma.

In the picture below of the pistil, the yellow green ovary is circled in black. I have blown this up quite a bit, so it is a little blurry, but you can hopefully see the ovary appears to have two halves – there is a line running along the middle. Each of these is actually a carpel, and the ovary consists of three united carpels – you can't see the third.



The orange stigma is circled in blue. The style is the lighter orange tube connecting the two circles. This line dividing the carpels actually runs up along the style – the styles for each carpel are also united so they appear as one. The same is true of the stigma. Sometimes the stigmas are separate, or at least may be during some point in the flowering process. If you look at last month's article, you can see 3 stigma lobes on the female *Hechtia* flower quite easily even though the carpels and styles are united.

The stigma lobes of Bromeliads also come in different forms – at least five of them. Maybe a later article? You can't really see it well at all, but here the lobes spiral around each other – this is called the conduplicate spiral form.

Two final observations about *Dyckias* and their flowers. Apparently, they taste good to some of us. For some of the pictures above, I had the flower in a small box. I took a lot of pictures and then looked at the screen on the camera to see how they turned out. Before I realized it, the flowers were wolfed down, rather enthusiastically.



One caveat here – I tried a small piece of a petal myself, and thought it pretty tasteless (though I would guess better than dog food.) Maybe with salad dressing!

Second, who knew you can even cuddle with your *Dyckias*? Here is Steve Ball at a SFV Bromeliad Society meeting in 2013, with one of the most well-known hybrids – the original *Dyckia* ‘**Brittlestar**,’ a Bill Baker hybrid. It is rarely seen since it is extremely slow to pup, but it has given rise to tons of other lovely hybrids. This particular plant was acquired directly from Baker almost 20 years ago.

