

# S.F.V.B.S.

#### SAN FERNANDO VALLEY BROMELIAD SOCIETY

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

http://sfvbromeliad.homestead.com/index.html <u>sanfernandovalleybs@groups.facebook.com</u>

## AUGUST 2015 NEWSLETTER

#### **OFFICERS**

Pres & News: Mike Wisnev

V.P.: Mary K. Carroll Secretary: \_\_\_\_\_ Treasurer: Mary Chan

Membership: Joyce Schumann

FaceBook: Barry Landau

V.P.: Mary K. Carroll Secretary: \_\_\_\_\_ Treasurer: Mary Chan

Web Page: M. Wisnev & Kim Thorpe

Directors: Steve Ball, Bryan Chan, Richard Kaz –fp, Dave Bassani-fp

# Next Meeting: Saturday August 1, 2015 Sepulveda Garden Center

16633 Magnolia Blvd. Encino, California 91316<u>AGENDA</u>

9:30 – SET UP & SOCIALIZE 10:00 - Door Prize – for members who arrive before 10:00

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

# 10:15 - Speaker: Andy Siekkinen "Bromeliads and Biodiversity in Brazil"



Andy has spoken to our club several times over the last few years. Andy represents our region in the Bromeliad Society of America (BSI). He is a chemist with a special love of plants.

He has been exploring Mexico for about 6 years

now searching for bromeliads in habitat. In addition to the extensive field work, right now he is also doing genetic research on the Hechtias.

His talk will cover the recent **BromEvo** conference he attended in Brazil and about the two regions of the country that he was able to visit. Focusing on the richness of biodiversity in Brazil and the variations in natural populations. That visit mostly focused on the Orthophytums and Hohenbergias, but there will also be some awesome shots of Tillandsias as well as some of the Aechmeas and Encholiriums.

#### **Interested in Touring Cuba with Andy**?

Please see announcements next page

#### 11:15 - Refreshment Break and Show and Tell:

Will the following members please provide refreshments this month: *Gregg DeChirrico*, *Mohamed El-Tawansy*, *Larry Farley*, *Bob Friedman*, *Steve Freize*, *Mardy Graves*, *Dana Groina*, *Nancy Hapke and anyone else who has a snack they would like to share*. If you can't contribute this month don't stay

share. If you can't contribute this month don't stay away just bring a snack next time you come.

**Questions about refreshments?** Call Mary K (818-705-4728). Leave a message - she will call back.

#### Feed The Kitty

If you don't contribute to the refreshment table, please make a small donation to the (<u>feed the kitty jar</u>) on the table; this helps fund the coffee breaks.

11:30 -Show and Tell - educational part of the meeting

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

So. Bay Bromeliad Show – many of us will go after this meeting. Directions to follow on the next page.

#### President's Message

Ana and I were out of town in June but I wanted to say a few words about the May show and sale. I was happy to see many of you at the annual show, and even happier for all the help.

Chris and Bryan help set up on Thursday. Bryan and Mary Chan were there the entire time, starting Friday before the show, with a great indoor exhibit, and selling plants outside, and helping out all over the place! Mary C. also gets all the hard work with the Treasurer's duties – kudos to her!.

Many thanks to Artie and Joyce for looking out for our club and making it affiordable. Mary k did a lot of work getting things organized before the show with all the tiny details like table clothes, organizing showroom, the flyers and all the small details that are never seen. Kaz drove from Simi to help in the kitchen but wasn't needed. Mary K. had an unbelievable Tillandsia exhibit inside. Richard Kaz put together a great Dyckia and Hechtia exhibit outside with additional contributions from Bryan, Steve and Chris. Kim Thorpe donated a number of Bromeliads that were raffled and some in the sale which really helped our profit margin – thanks very much. Kathleen Misko donated tillandsias on choa wood which sold well. Mary C and Ana were helping out with the raffle. Leni and Mary K were inside with the exhibit almost all the time educating visitors about bromeliads. Steve Ball and I exhibited plants, as did Bryan, Chris, Don, Kathleen, Kim, Leni and Richard. Bryan, Richard, Don Misumi, and Michael & Terral Matsumoto sold plants and manned the sales booth. Big Steve Rudolph and Nancy were there helping out where ever needed. Nancy and Mary C. helped Kathleen, Kim and Roger with the Kids Day activities. Rogers videoed our Bromeliads which we will see at a later date.

I'm sure I missed others who helped out – my apologies and thanks for your help.

I hear I missed a great program by Guillermo in June.

Mike Wisnev

#### **Announcements**

- The July meeting was canceled due to the Independence Holiday
- <u>Touring Cuba with Andy at the end of August</u> Andy has a tour company; leading botanically themed vacations. If you are interested in the 11 day trip, contact <u>Eagle Eye Adventures</u> (<u>www.eagle-eye-adventures.com</u>). <u>http://siekkinenar.wix.com/eagleeyeadventures</u>
- <u>Directions to South Bay Bromeliad Show & Sale</u> on Sat & Sun August 2 & 3 at Rainforest Flora Inc.,
   (RFI) 19121 Hawthorne Blvd. in Torrance. Directions from Sepulveda Garden Center: (approx. 25.5 miles & 30 min.) East on 101 Fwy. / South on 405 Fwy. towards Santa Monica / Exit # 42A at Hawthorne Blvd. It is a very good show and RFI is always worth seeing.
   <a href="https://www.facebook.com/pages/Rainforest-Flora-Inc">https://www.facebook.com/pages/Rainforest-Flora-Inc</a> <a href="https://www.youtube.com/watch?v=oTLOMjRS3FE">https://www.facebook.com/pages/Rainforest-Flora-Inc</a> <a href="https://www.youtube.com/watch?v=oTLOMjRS3FE">https://www.youtube.com/watch?v=oTLOMjRS3FE</a>
- Do you want to join the LA Cactus Club for the Xmas celebration in the evening? We will discuss and vote.
   Club Website. Kim set up the web page a few years ago but was to busy to keep it up. Mike has updated it and added some new pages like Bromeliad Basics, and another with other sites for those that want to learn more. There is a Calendar page and the Newsletter page has all the Newsletters back to mid-2013.
   http://sfvbromeliad.homestead.com/index.html

**Facebook -** Barry has linked our face book page to the website; take a look at it when you get a chance <>

- Welcome New Members: Eddy Sattah, Scott Spreckman, Gloria Vargas, Pat Byrne, Ana Park, Tom Moore. Please reach out to make them feel welcome.
- Birthdays We don't have your birthday listed? Maybe you didn't give us the date. Please make a point of telling Joyce your birthday at the next meeting or email her at ropojo@pacbell.net
- Happy Belated Birthdays for July Duke Benadom- July 1, Mike Wisnev- July 03, Carole Scott July 7, Barry Landau July 10, Gloria Friedman July 13, Georgia Roiz July 11, Wesley Bartera July 23 and Ana Wisnev July 30
- Happy Birthdays in August Bob Friedman will be 93 on Aug 05, John Martinez Aug 16, Steve Ball Aug 29 and Mary Chan,

#### Mary K. is taking a look back at May and June ......

May Festival - was a huge success. To those who weren't there.... you missed a nice social event and SFVBS made a little money. It was a good place to see all your other plant friends. A lot of people attended the free festival buying plants, books, tools and food; they also enjoyed looking at educational displays, plants, pottery, reptiles, tortoises and turtles. Sunday several of our members helped with the Kiddie activities. Of Course Artie was a great overseer; last year Cheryl White and David Lee were understudies; this year they were pros putting on a spectacular event.

We are too small to have a judged show but we had nice Bromeliad displays both inside and outdoors. Many of our members participated, some a lot all weekend and others for short periods. Mike has already listed most of the members who participated but here is a big thank you from me. *THANK YOU!* The members who participated in any manner deserve acknowledging, we know who you are. Thank you very much. Shame on the rest of you for not helping. Not everyone is physically capable of helping put on a special event like the show, but there are very few excuses for not visiting the show; we need your support.

June Meeting - Mike was vacationing and I had to leave early. Thanks to others for stepping up. Our speaker, Guillermo Rivera, gave a great presentation as usual. We look forward to his next visit from Florida. He has such great data collected from his tours. Thanks Kathleen for submitting the photo.

We had 8 visitors, resulting from our efforts at the May Show, now 4 are new members. Thanks to Kathleen and Leni for managing the kitchen and all the others who donated; we had some great food donated for refreshments. WOW did we have raffle plants! We had amazing Raffle Plants donated by Bryan, Kathleen, Chris, Michael Matsumoto, Nancy, Duke, Bob Friedman,



Richard Morse, Leni and Mary K. This was one of the best raffle tables we have ever had. If you purchased tickets should have gone home with a great plant. Mary k passed out plants to the visitors and new members.

Ramblings about Better Growing the editor is looking for information from other members for this column. You must 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.

Bromeliads have few pests that damage the plant, the most harmful being mealy bugs and aphids. However, there is one human pest that can thrive in a bromeliad. While mosquitos do no damage to the bromeliad plant, they can be a nuisance.

#### our annual Mosquito Reminder

The *Wyeomyia vanduzeei* and *Wyeomyia mitchellii*, are keenly adapted to life in bromeliads. Fortunately, these two species are currently not known to transmit diseases. They are simply a nuisance. The *Wyeomyia* are most active during the daytime and are not susceptible to night time community fogging.

Mosquitos function best at around **80 degrees** and cannot function at all when the temperature drops below 50 degrees. They live in the same tropical environments as the outdoor growth of bromeliads, similarly ideal for year round mosquito production.

Washing the bromeliads with a garden hose very regularly (3-4 days) can also reduce mosquito populations. The pressure will force the eggs out onto the ground, where they cannot survive. It will also remove the debris. If you use this method, you must occasionally fertilize. Normally the bromeliads feed off the debris.

With diligence and care, you can avoid aiding the rapid production of mosquitos in your back yard. If you have only a small collection of bromeliads, they are not likely to contribute significant mosquito populations to the neighborhood. But, if you are a bromeliad enthusiast and your landscape is made up of many tank forming bromeliads, you may want to consider whether or not mosquitos are a pest problem for you and your neighbors. If they are, find a management approach that will reduce the population of the mosquitos to a manageable level. If possible, avoid using chemicals so that the ecosystem in your yard will stay healthier in the long run.

Water will become stagnant in 3-4 days, attracting mosquitoes. Because we have a lot of Bromeliads and find it difficult to dump each one, I have found that adding some fresh water twice a week is sufficient to deter stagnation. *Submitted by:* marykcarroll

#### **Sources:**

Frank, J.H. Bromeliad-inhabiting mosquitoes in Florida. <a href="http://BromeliadBiota.ifas.ufl.edu/mosbrom.htm">http://BromeliadBiota.ifas.ufl.edu/mosbrom.htm</a>
FAQ's on Mosquitos. Rutgers Center for Vector Biology. <a href="http://www-rci.rutgers.edu/~insects/mosfaq.htm">http://www-rci.rutgers.edu/~insects/mosfaq.htm</a>
Bromeliads and Mosquitos. <a href="http://www.pinellascounty.org/PublicWorks/mosquito/pdf/bromeliads-and-mosquito-control.pdf">http://www.pinellascounty.org/PublicWorks/mosquito/pdf/bromeliads-and-mosquito-control.pdf</a>>

### -- Broms in Bloom - Member Plants --

( send us your photos )

# Please Put These Dates on Your Calendar Please Put These Dates on Your Calendar

Saturday, August 1, 2015	Speaker: Andy Siekkenen "Biodiversity in Brazil"
Sat & Sun, August 1 & 2, 2015	South Bay Bromeliad Show
Saturday, Sept 5, 2015	Speaker: Woody Minnick "Bromeliads of So. America"
Saturday, Oct 3, 2015	Speaker: <i>Pam Koide</i> "Exploring with Werner Rauh"
Saturday, Nov 7, 2015	SFVBS Regular meeting - STBA
Saturday, Dec 5, 2015	Holiday Meeting – Time ???

#### **STBA** = Speaker To Be Announced

**Speakers** - We have some interesting speakers lined up for the next few months of this year but it is never to early to start planning for 2016. 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 Mary K. at 818-705-4728 or e-mail <a href="mailto:rango676@aol.com">rango676@aol.com</a> <>

## Taxonomic Tidbits -

## Hechtia Mysteries at the HBG, Part 2 - Hechtia montana

By Mike Wisney, SFVBS President (<u>mwisney@sbcglobal.net</u>)

San Fernando Valley Bromeliad Society Newsletter - August 2015

If I haven't mentioned it before, I have done some volunteer work at the Huntington Botanical Gardens ("HBG") for the last year or so. I have been going there frequently since about 2005 when I got interested in cacti and succulents. When I joined the Bromeliad Club, I was shocked to realize just how many Bromeliads were in the Cacti Garden at HBG. Most are *Dyckia, Puya and Hechtia.* Many of them aren't labelled, and others are but don't have names. So I started trying to figure out what some of them might be.

I probably could not have picked a genus worse than *Hechtia*! They are generally not well described, and all of them are dioecious which means each plant is either male or female unlike the vast majority of Bromeliads which all have perfect flowers (they have both male and female parts.) Often the female and male flowers don't look alike. In other cases, male flowers of different species can look the same. Even worse, many *Hechtia* have only been described from a male or female flower – thus, it is impossible, without going to habitat, to know what the other flower looks like. Sometimes there is no description of the flower, but only the fruit. So many of the species look alike vegetatively, that it is extremely unlikely that you can identify one without a flower. Often there is not a single picture anywhere on the web that I can find of the flower of many species.

I am happy to report that I have made some headway - With the help of some experts, I have identified some *Hechtia*. There is a lot of detective work involved, trying to match plants, localities, HBG card and descriptions, and getting confirmation from one of the experts. Even here there are problems, since none of the experts is familiar with all the species – each has been to various different locations in Mexico and is thus familiar with some, but not all, species. In some cases, it appears none of them real expertise with some species. In others, they have different views of what the species even is.

There are still many that remain unidentified, despite the fact I have seen the flowers. Sometimes they don't seem to match up with any description, and in others various plants with the same name look quite different. As a result, I decided to write up some of these mysteries in the hope that someday they will be identified. Since I already wrote up my problems with the *Hechtia glomerata* and texensis at the HBG, I will call this article *Hechtia* Mysteries at the HBG, Part 2, and deal with *H montana*.

To give you a sense of the difficulty involved in trying to figure this out, I will first share virtually everything I know about *H montana*. While I have provided parts of a real botanical description before, I don't think I have provided a complete one. This is the complete description of *H montana* in Smith & Downs (I have highlighted in red some of the more important features):

"Plant imperfectly known, probably about 1 m high.

Leaves numerous in a dense rosette, 15<sup>-45</sup> cm long;

sheaths large, broadly ovate to suborbicular, brown, glabrous or obscurely punctulate;

blades linear-triangular, pungent, 2-3 cm wide, cinereous-scurfy below, appressed-lepidote and soon glabrous and shiny above, armed with slender uncinate brown teeth up to 5 mm long and 10-25 mm apart.

Scape terete, 1 cm in diameter, sparsely floccose-lepidote, soon glabrous;

scape-bracts strict, the lower ones foliaceous, 10<sup>-</sup>15 cm long, imbricate, the upper linear-lanceolate, pungent, remote.

Inflorescence laxly bipinnate, slenderly pyramidal, 3<sup>-</sup>5 dm long, sparsely white-floccose, soon glabrous; primary bracts lance-ovate, acuminate, much shorter than the axillary branches, sparsely serrate or entire; racemes sessile or subsessile, ascending or spreading, laxly flowered especially in the pistillate plants, up to 16 cm long.

Floral bracts linear-lanceolate, acuminate, equaling or exceeding the staminate pedicels, about half as long as the pistillate pedicels,

flowers spreading; pedicels slender, the staminate 2<sup>-3</sup> mm long, the pistillate 4-8 mm long. Staminate sepals broadly ovate, acute, 2.5 mm long, thin; pistillate sepals narrowly deltoid, attenuate, 3 mm long, much thickened at base and bearing 3 prominent nerves;

staminate petals broadly elliptic, obtuse, 4.5 mm long, pale-yellow; pistillate petals deltoid, acuminate, 5 mm long;

stamens included;

ovary slightly inferior; stigmas sessile.

Capsule ovoid, acute 1 cm long;

seeds oblong or falcate with a narrow dorsal wing which is prolonged at apex into a narrow appendage nearly as long as the seed.

TYPE. T. S. Brandegee s n (holotype, UC), common about San Jose del Cabo along the base of the mountains, Baja California, Mexico, May 1897.

DISTRIBUTION. Saxicolous, 300-720 m alt., northwestern Mexico.

MEXICO. BAJA CALIFORNIA: Todos Santos, Brandegee s n (US); San Jose del Cabo, 6 Sep 1891, Brandegee s n (UC); Apr 1897, Brandegee s n (F); 26 Mar 1911, Rose 16501 (NY, US); E1 Potrero, 31 Oct 1905, Nelson & Goldman 7244 (BM, US); Puerto Escondido, 14 June 1921, Johnston 4106 (GH, US); Las Parras, La Giganta, 19 Nov 1952, Harbison 44956 (SD, US). SONORA: Hermosillo, 6 Mar 1910, Rose, Standley & Russell 12474 (F, GH, US); La Palma, Sierra Libres, 9 Mar 1933, Wiggins 6475 (DS, US); San Carlos Bay, Guaymas, 19 Mar 1934, Ferris 874 7 (DS, US). SINALOA: Colomas, Sierra Madre, 21 Jul 1897, Rose 1806 (US); Creston Island, Mazatlan, 1 Aug 1932, Howell 10542 (CAS, US)."

Thanks to Derek Butcher's materials, here is an herbarium specimen of a plant collected in Baja by Brandagee in 1897.



That is it. That is all I know! I have some other pictures of H montana in Derek's materials, but I am not sure where they were collected, and often they don't seem to match each other very well. One has flowers, but this plant look more like *glomerata* to me. Probably the best information is provided by Andy Siekkinen, who has spoken to our club numerous times, if you are interested. But no

http://eagleeyetravel.blogspot.com/2013/06/hechtia-montana-variability-in.html.

Based on what I have found, the only *Hechtia* found in Sinaloa and Sonora is *H montana*, though there may be others not yet described. I have found at least six different labelled *Hechtia* at HBG from these two states, some of

which have more than one clone. Three are labelled H montana, one is labelled H podantha (I am certain it is not) and two don't have species names. I have seen flowers on three of them, HBG 21506, 21507 and 21508, and will focus on these.

One advantage of being a volunteer is that I finally get to ignore those pesky signs admonishing you to stay on the paths – I get to wander everywhere!. These are in the middle of one bed off the beaten path.

The numbers and names are those found on the tags (leaving off the 21...). While these plants look a bit different, none of them is strikingly so, and before they flowered I had no problem thinking they were all *H montana*. Notice there are three specimens of HBG 21506, and it turns out there are both male and female plants.





While I can't find a card for HBG 21506, the label and computer records reveal it was collected in Guirocoba, Sonora by Robert Foster. Here is the male plant, followed by the female plant.

Female species



Here is HBG 21507, collected by the same fellow in Guasimas, Sonora.  $\,$ 



All three of the above plants look extremely similar. They all clump the same way, are somewhat scurfy with thin leaves and most have a bit of hair on the spines. So I was quite surprised when I first saw that 21506 was labelled podantha and 21507 montana. When I later learned that podantha is not found anywhere near Sonora, well that cinched it.

HBG 21508 was collected in San Carlos Bay, Sonora. It looks a bit different, primarily in the lack of scurf on the leaves, and being even more furry in the spines.





To be complete, HBG 20436 from Rio Piaxtla Sinaloa and HBG 39304 from Badiraguato Sinaloa look very similar to the above plants. A small suffering HBG 24542 from San Carlos Sonora is quite different, but this variability is consistent with Andy's website.

At this point, none had flowered, but it seemed quite possible if not likely that all are the same species, at least all but the last one. Things got interesting when they started to bloom. Unlike most other *Hechtia* at HBG, which bloom in spring or early summer, these all bloomed in August - October. The fact they bloomed together was encouraging.

If you go back to the description you will see that the male flowers of *H montana* are reported as yellow. I was interested in this, since most male flowers I have seen are white, or off white or cream colored. The flowers are pedicellate which means that they have flower stalks. Most I have seen are sessile – they grow right off the branch without a stalk. So I figured that if these plants were *H montana*, it would be fairly easy to confirm based on these two features.

Two of them bloomed in late August. HBG 21507 has the longest pedicels of any *Hechtia* flower I have seen – about 4 millimeters. But the flowers are white with red sepals. It also has long thin and wispy scape bracts, which are not all that common.







Interestingly, the pedicels are shorter than those of the male, unlike that reported in the description. The scape bracts are quite different than the male also. The flower colors are quite similar, though neither is yellow. The shape of the sepals and petals of both plants seems to match the description reasonably well, though not exactly. In any case, I figured they are likely the same species – the differences are entirely consistent with other species that have very different male and female flower shapes and colors. But what about the color – nothing in the description suggests anything red or maroon like these two plants have. I was really looking forward to the flowers on the others, which already had pretty well developed inflorescences.

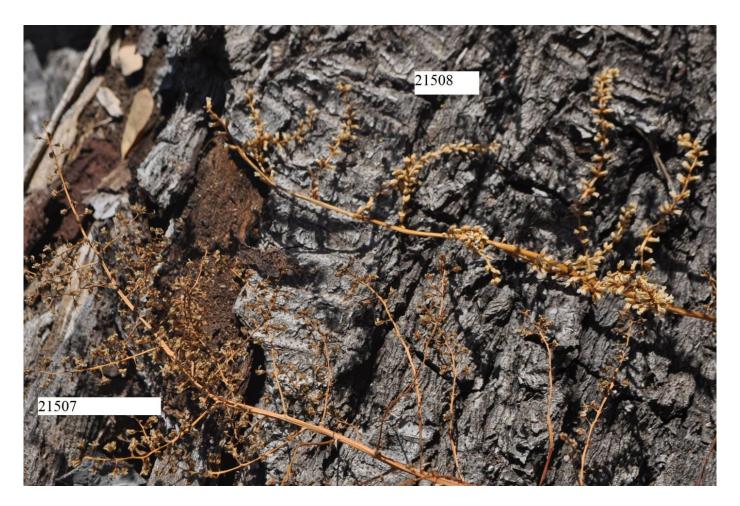
Within a week the male 21508 bloomed. Now the confusion really starts - see for yourself.



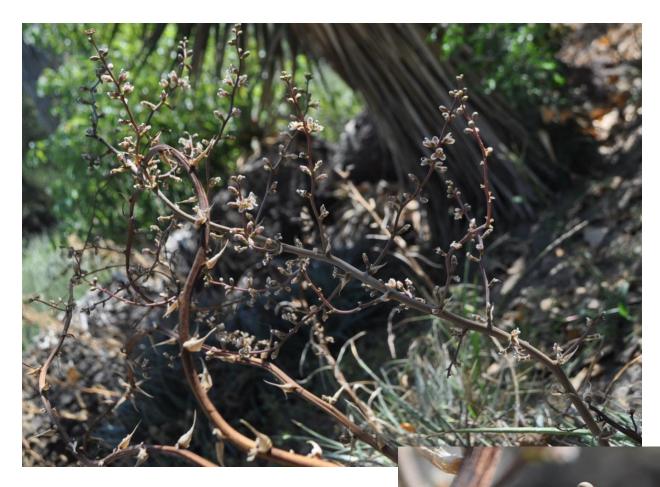
These don't seem to resemble the male 21507 flowers at all – the color is way off. And while you can't tell easily on the pictures, the branches of the inflorescences are about twice as thick (but much shorter) as those of 21507 which had extremely thin branches.

Of course, species can be quite variable. And growing conditions can influence the way the plant and flowers look. More sun change the color. While these plants are all growing within about 30 feet of each other, there are trees around that can shade some and not others. Indeed, notice this plant above is in sun, while the others are more shaded. Still, it seems unlikely to me that there is this much difference in the same species.

I confess to having difficulty working with herbarium specimens. While you can often tell a lot from them, you don't get much about the flower, and certainly nothing about color. To show how difficult it is to work with dried specimens, compare these two – with the dried 21508 on top and dried 21507 underneath. The length of the inflorescence is about the same, as are the 21506 – all about 36-40 inches when I measured them. The side branches vary from 3 – 6 inches.



In early October, the male 21506 bloomed – it seems generally consistent with the male 21507, though with shorter pedicels.



Finally, I just missed the flowers of HBG 20436. You can tell they are pedicellate, and they seem consistent with the female 21506 flowers. The branches seemed longer (I didn't measure). If you are observant, you will see this branch is lepidote, while all the ones above are glabrous.





If this wasn't enough, I later learned a bit more about 21506. I had gone thru all the *Hechtia* cards by now, and there wasn't one for 21506. But I asked Sean Lahmeyer there whether the computer had any info, and got the locality noted earlier. He also said it reported – "Lvs slivery; rachis reddish brown; infl. branches yellow; flws yellow. Staminate plant." Yellow flowers????? Does this mean the labels in the garden are wrong, or are the growing conditions different enough that the flowers show a different color at HBG than in habitat. Perhaps the flowers were dried up when they were described and appeared yellow? Who knows – all is speculation at this point.

Finally, I went back to the web. Rather than googling *H montana*, I tried *Hechtia* Sonora, then H Sinaloa and H Baja. I got some more pictures, consistent in general with the ones above, but more variable. But nothing showing flowers. The best was here.

http://swbiodiversity.unm.edu/collections/individual/index.php?occid=1960339

Here are some other ones.

https://www.desertmuseum.org/programs/alamos\_bromel\_terr.php http://peeeka.xraylead.com/view/image/id/5769178566#!Hechtia+species http://naturewatch.org.nz/observations/501081

Continuing to search I found these pictures under *H montana*. .



Picture above taken by Fernando Arcas. Below taken by Dick Trelease.



The first one has no information, so I have no idea how accurate it is. But its features match extremely well with the description of the female *H montana* flowers, especially the narrow deltoid sepals and petals. The green coloration is consistent with the male HBG 21508 plant.

The second picture was taken at the Phoenix Botanical Garden. It certainly matches well with the HBG 21506 and 21507.

I wish could tell you I had an answer to these many questions. It is a bit maddening. To be honest, without going to Sonora and Sinaloa, or finding someone who has been there and seen the flowers, we will probably never know the answers. I try to be cautious in labelling plants, at least those that might ever make it out of my own collection. So here, I can only say, it seems that

- 1. HBG 21506 and 21507 seem likely to be the same species and matches the Phoenix Desert Botanical Garden speciman.
- 2. HBG 21508 seems to be a different species, unless *H montana* flowers are extraordinarily variable.
- 3. It is too early to assess the other ones at HBG.
- 4. I am not sure which of them are *H montana!* Indeed, given the two pictures above found on the web, it would not surprise me if one of them is a new species that has not been described.