The BROMELIAD SOCIETY of SOUTH FLORIDA
MIAMI, FLORIDA.

BromeliAdvisory

November 2009

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What	Who
Sales Table	Antonio Arbelaez

NOVEMBER 3, 2009, 7:30 PM
SPEAKER: Ron Cave program for next meeting will be "An Update to the Biological Control of the Mexican Bromeliad Weevil and other Invasive Insects"
FOOD: It will be there

RONALD D. Cave, Ph.D.

As an assistant professor of Entomology in the Department of Entomology and Nematology at the University of Florida's Indian River Research and Education Center, Ron Cave, according the school's web page, "He teaches two classes: Principles of Entomology, and Fundamentals of Pest Management. Dr. Cave's research focuses on the biological control of invasive arthropods, particularly the cycad aulacaspis scale and the Mexican bromeliad weevil. Dr. Cave's international experience includes work in Honduras, Paraguay, and El Salvador." His publications are extensive, and more about Dr. Cave can be found at http://www.irrec.ifas.ufl.edu/rcave.php.

INSIDE THIS EDITION:

In Case You Missed It
by Robert Meyer

"It" can mean many things. Since the event indoors was the auction, I will defer and state that it was a success and nit much more.

The other "it" was the field trip to Broward County. Tim & Colleen Hendrix w/ Bud Hendrix at 21 Holly Lane, Plantation, FL 33317 Wow, what a garden. Plants were there for sale and my favorite – beer at 10:00AM. Second, Bill & Maureen Frazel, 12500 Lake Road a/k/a/ SW 12th Street, Davie, FL 33325. A collection of plants as old as 20 years – and many species. Lastly, Jorge Rodriguez & Josefa Leon (Sunshine Bromeliads), 14601 Old Sheridan Street, Southwest Ranches, FL 33330 where plants again were for sale, and topped off with free lunch, drinks and cake for birthday girl, Josefa. And, some of the lucky ones got to see Josefa's shelter for this year's plant show.

All in all, it was a great event which appeared for doom at the morning's sunrise as rain poured heavily in Miami-Dade, but apparently decided to forego the same for Broward.

Thanks to the hosts and this will probably be something done again in the not-too-distant future.

NAT DELEON TO SPEAK

Save the date: November 18, 2009 at 7 PM.
Place: Library in Pinecrest – next to Pinecrest Gardens fka Parrot Jungle.
11000 Red Road

***ALCANTAREA* - VARIEGATED PLANTS ARE COMING**
by Alan Herndon

Those of you who attended Chester Skotak's keynote talk at the Bromeliad Extravaganza sponsored by the Bromeliad Society of Broward County in 2007 will remember the many pictures of gorgeous variegated *Alcantarea* plants at his nursery in Costa Rica. Brazilians, of course, have had numbers of variegated *Alcantarea* species for many years. Now it turns out that the Australians have also been building up stocks of variegated plants. The wonder is that so very few of the variegated plants have made their way into our markets. You can expect this to change over the next few years.

It turns out that variegation crops up in *Alcantarea* with some frequency in seedlings, and both the Brazilians and Australians tend to grow many of their *Alcantarea* crops from seed. Of course, the occurrence of variegation is still quite rare, and particularly attractive, stable variegations are very rare.

An article by Bruce Dunston in the July/Aug 2009 issue of Bromeliaceae, the publication of the Bromeliad Society of South Queensland, provides all of the information I have on these plants in Australia. It also provides some spectacular pictures of variegated *Alcantarea* species found in Brazil.

In Australia, many more seedlings are raised every year than the market can absorb just to search for more variegated varieties. The challenge is to sort out desirable seedlings at the smallest possible size. All seedlings showing any sign of variegation have to be saved until it becomes evident that the variegation will not produce a useable plant. It is certain that thousands of seedlings will have to be discarded for every variegated seedling found, but the lure of discovering a unique varigated variety is strong enough for me to devote space to growing batches of *Alcantarea* seed in the future.


Photo by Shirley Grills-Konefal as shown on FCBS web site

When an especially beautiful variegated *Alcantarea* is obtained, there is no quick way to increase the numbers. In general, tissue culture will not produce variegated clones from a variegated plant, nor will seedlings from a variegated plant come out variegated. The

method Bruce Dunston uses most is encouraging the production of hair pups at the base of the stem These hair pups sometimes have the same variegation as the parent plant. Variegated pups are removed as soon as they reach a decent size and grown out (pups not showing signs of variegation are removed and discarded as soon as they can be identified). The potential rate of increase is determined by the proportion of the hair pups that have useable variegation.

Of course, not all *Alcantarea* species produce hair pups to the same degree as *Alcantarea imperialis*. Plants like this can be grown to a reasonable size (say 8" pot size), then the apical meristem is killed ('spiked') to encourage the growth of pups. If hair pups are produced, they are treated as above. If only central pups are produced, they are allowed to grow until the mother plant shows signs of falling apart. Central pups are more likely than hair pups to develop variegation matching the parent, but only a few pups can be produced from each parent by this method. Plants that lose variegation as they grow can be similarly spiked in hopes of producing pups that maintain variegation better.

Brazilians have long had variegated *Alcantarea* in their own gardens, but they have not been anxious to market them to the outside world. The two variegated cultivars of *Alcantarea imperialis* listed in the Bromeliad Cultivar Registry as of 2007('Gladys' and 'Helenice') come from the Brazilian nursery Bromelario Imperialis. 'Helenice' was registered in 2001. Karl Green has seen many variegated plants during his travels to Brazil, but the only one he has been able to bring back is an albomarginate (actually flavomarginate since the production of chloroplasts is reduced but not eliminated in bands along the leaf margins) form of *Alcantarea extensa*. I have seen no evidence of hair pup production from his plants over the past 2 years, even though other clones of *Alcantarea extensa* seem to readily form hair pups. Chester Skotak got some of his variegated *Alcantarea* from the Brazilians, although I am sure he has added other forms through his own breeding efforts.

It would be surprising if the Hawaiians do not have a stock of variegated *Alcantarea imperialis* under development also. David Fels and David Shiigi, at minimum, have been growing *Alcantarea* in quantity from seed for many years (and have produced many unique color forms to prove it), although I have not yet heard of them having variegated plants.

With all of the variegated *Alcantarea* production currently known, it is clear that the time is ripe for exploitation of the American market. It also seems clear that most of the current clones are not very stable with regard to variegation. This is undoubtedly why production has been so slow over the past several years. Still, I would expect variegated plants to starting entering the country at any time. You will undoubtedly pay a heavy price for bragging rights as one of the early owners. A variegated *Alcantarea* in your garden, after all, would truly be something to brag about. And it may take a while for the price to drop to a point where I could afford a plant. Yet, I eagerly anticipate the day when these plants finally make their way into our collections, and I can, at least, dream of owning one.

What's in Bloom - October 2009

by Alan Herndon

The slowdown in blooming continues, although there are still several new species blooming this month. The record for *Aechmea blanchetiana* as newly blooming is clearly false. I undoubtedly failed to note the continued blooming of this plant since it last appeared in the list. On the other hand, it appears that *Neoregelia* species (especially in subgenus *Neoregelia*) are closing down for winter.

Aechmea (*angustifolia*, ***blanchetiana***, *chantinii*, ***corymbosa***, *contracta*, *cucullata*, ***echinatus***, *farinosa conglomerata*, *farinosa discolor*, ***kuntzeana***, Little Harv, *mulfordii* (red leaf form), ***nudicaulis***, *phanerophlebia*, *tillandsioides*, Victoria)
Alcantarea (*imperialis*, *odorata*)
Billbergia pyramidalis
Bromelia humilis
Canistropsis billbergioides
Catopsis (*compacta* (=*berteroana*), ***nutans*** (FL))
Cryptanthus warren-loosei
Edmundoa lindenii
Hechtia rosea

Hohenbergia (*distans*, *edmundoi*)
Neoregelia (*compacta*, *cruenta*, **Fireball**, *myrmecophila*, *pendula brevifolia*, *rosea*, Sheba,Ultima)
Nidularium (***angustibracteatum***, ***apiculatum***, *ferrugineum*, ***krisgreenii***)
Orthophytum (*compactum*, *disjuncta*, *duartei*, ***grossiorum***, *harleyi*, ***hatschbachii***, *lymaniana*, *magalhaesii*)
Pitcairnia (***albiflos***, *armata*, ***echinata vallensis***, *imbricata*)
Tillandsia (*aeranthos*, ***chiapensis***, *extensa*, *jalisco-monticola*, ***lindenii***)
Vriesea (***eltoniana***, ***ensiformis***, *gradata*, *triligulata*)

Clone preservation project update - Oct 2009

by Alan Herndon

Terrie Bert pointed out that my treatment of the relationship between *Aechmea fasciata* and *Aechmea dealbata* was so terse that it could easily be misinterpreted. I fell into the error of writing in my own internal shorthand (one of the disadvantages of working without an editor), and failed to catch it. An expanded explanation follows.

In almost all natural plant species, there is a range of genetic variation in all important characters. This means plant shape, leaf shape and markings, inflorescence size and branching, flower size and color all vary (within limits). We don't see the full range of variation when dealing with cultivated plants. In fact, we may only have a single clone of *Aechmea dealbata* in our collections (although I am trusting some of you will yet prove me wrong), so we have no genetic variation to examine. When we do have several wild-collected clones in cultivation (as in *Aechmea fasciata*), we have a better (though still incomplete) feel for the natural variation within the species. When I said *Aechmea dealbata* is very similar to *Aechmea fasciata*, I was thinking about comparing *Aechmea dealbata* to the range of *Aechmea fasciata* clones in my own collection. *Aechmea dealbata* looks like the smaller plants of *Aechmea fasciata* in terms of size, leaf shape, inflorescence shape and inflorescence structure. This does not, nor was it intended to, imply that *Aechmea dealbata* is taxonomically identical to *Aechmea fasciata*. As mentioned, the bracts of the inflorescence are darker and duller in *Aechmea dealbata*.. Also, the petals are different in color from those found in *Aechmea fasciata*. These are potentially significant characters in the taxonomic sense (i.e. they can be used to separate two taxonomically distinct plants). Indeed, *Aechmea dealbata* is currently treated as a distinct species

Aechmea dealbata. Photo by Derek Butcher courtesy of FCBS.

Please let me know whenever you find a passage in these updates confusing or incomprehensible. There is probably a rational explanation for what I said even if I was unable to articulate it correctly.

I also want to take the opportunity to expand on something I said during the discussion of *Aechmea chantinii* cultivars. In describing the banding, I said the white bands were formed by trichomes while the dark bands were areas without trichomes. If you are examining the leaf through a hand lens, this would be an adequate explanation. At higher magnification, it is clear that trichomes are more-or-less evenly spread over the leaf surface. In the white bands, there is a margin of cells on the trichome that stand out from the leaf surface.

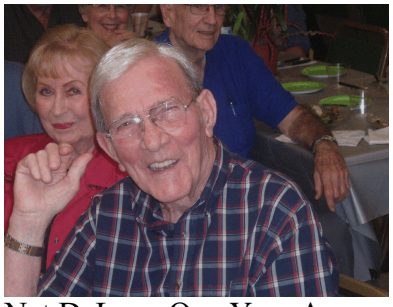
These cells scatter light very effectively to give the white appearance. In the dark bands, the cells of the trichome are pressed against the leaf surface and do not modify the color of the surface at all. The trichomes with the upright margins may be physically different from the trichomes with spreading margins (say, by having an extra ring of cells), but I do not have the equipment to determine this. In any case, it is an interesting question why the two types of trichomes tend to occur in groups rather than being scattered randomly. I would also like to point out that similar banding (though never

Till. Hildae Photo by Derek Butcher. Courtesy of FCBS

so evenly distributed) is seen in several other bromeliad species.

Some forms of *Aechmea fasciata* and *Aechmea nudicaulis* come immediately to mind. *Tillandsia hildae* also has quite strong banding. I haven't looked at these plants carefully to see whether the banding has the same origin. The case of *Tillandsia hildae* will be especially interesting because the silver-leaved *Tillandsia* species in general have trichomes that become fully saturated when given water and cease scattering light. You can see the dramatic difference in the leaf color of these plants when you water, and you can watch the silver return to the leaf as the surface dries out. With *Aechmea chantinii*, and the other *Aechmea* species, the color difference between wet and dry leaf surfaces is much less pronounced. This suggests the upturned margins on the trichomes (of *Aechmea chantinii*, at least) never become saturated.

Nat DeLeon provided more information on the *Aechmea chantinii* cultivar 'Dark DeLeon'. It has stiff, more-or-less erect leaves with a dark ground color and uneven banding. In other words, it will be similar to *Aechmea chantinii* 'Pink Goddess' with a dark colored leaf. At this point, I do not know what the inflorescence will look like.


Nat DeLeon One Year Ago

Wally Berg was, aside from being a great collector and grower of bromeliads, an inveterate list maker. He kept track of several numbered series of collections. The most important series was the BAB series of plants from Brazil. Many of these were plants collected by Wally Berg and John Anderson in their travels. Some were plants they found in the gardens of important Brazilian collectors. Relatively detailed information is available on the collection localities of all plants. I have heard of some 250 plants in this series.

Wally Berg's collection was dispersed through an auction held after his death and many of the plants went overseas. However, he shared plants with many other collectors before his death. John Anderson also had a (presumably) complete set of the BAB plants that he, likewise, shared with others. The question is whether we can still identify and preserve all of the plants in this series.

If you have plants in your collection with BAB numbers, please let us know. (Take care to note that there is also an EAB series of plants collected in Ecuador. Right now I would like to concentrate on BAB numbers.) You can use the format introduced last month. Two points to remember when producing your list: the plants were distributed under names that were sometimes provisional _ so more than one name might be associated with some plants in the series. In addition, the simple numbering system used is prone to errors in transmission. For instance, BAB 191 could easily be interpreted as BAB 194 if a stray mark showed up on the tag, or the opposite could occur just as easily. It should be possible to correct many of these errors and provide a centralized list of names for each plant in the series.

I have many plants from the BAB series in my own collection, and will have them in spreadsheet format by next month. In the meantime, if any of you has access to the original listing for the BAB series (or any other Wally Berg series), please share it with us. I would provide a solid baseline for the database.

Finally, please remember to let me know if there are other people who might be interested in receiving these updates.

PRESIDENT'S MESSAGE
by Robert Meyer

Again, I thank all of the Broward brothers who entertained us the weekend of October 24, 2009. The attendance by our people was significant, especially in light of the problems created by mother nature who thunder and lightening hit Miami-Dade quite squarely, but apparently she was forgiving this time to Broward where the weather was dry and muggy (a Florida term).

The hints and clues that one can obtain by witnessing masters at other locations can be

immeasurable. And with flattery's best form to follow, I have already begun tying innumerable *tillandsia* to palms in my yard in honor of Josefa – although she may speak harshly to me as I use plastic cord instead of nylons.

We can only hope for more ventures in the future where the organization's membership only greatens and friendships broaden. These events adhere to the specific By Laws' request for entertainment and broadening of education to the community about the plants.

If anyone has an idea for a site of a future caravan, feel free to deliver such message to me or any of the board members.

JOIN the BSSF:
Friends or Family contact Moyna Prince at 305-251-5289
Download application sheet at:
http://www.bssf-miami.org/membership.htm

Start Preparing for Winter

by Alan Herndon

Days are beginning to grow noticeably shorter. The sun is lower in the sky. Temperatures are beginning to fall (although this may not be especially evident to most readers given that daily high temperatures have rebounded into the upper 80's as these words are written). We are truly seeing the end of summer, albeit more in promise than reality.

It is important to reduce the amount of fertilizer you feed your plants over the next few months

Bromeliads in your garden are still holding memories of summer, and plants that bloomed earlier in the year are displaying these memories in the rapid growth of offsets. Keep careful watch on the offsets. As the sun goes lower in the sky, your offsets may find themselves in too much shade and become 'leggy' (with narrow and thin leaves that can't hold themselves up the way a proper bromeliad leaf should). You may have to move the parent plant into a location with more light or remove some shade from the vicinity of the parent plant.

It is important to reduce the amount of fertilizer you feed your plants over the next few months. With the reduced sunlight and cooler temperatures on the way (eventually), your plants will naturally be growing more slowly and will need less fertilizer. If you continue with your regular fertilizer schedule, your plants will respond in the same way as if you doubled the dose of fertilizer, or moved them into deep shade, during the summer months. The newer leaves will come up green and leggy. In addition to ruining the proper leaf proportions you are trying to achieve for the show table, this puts your plants at greater risk of damage when the inevitable 'cold' spells appear. Perversely, our coldest days and nights tend to come after a period of unseasonably warm weather. Overfertilized plants will be growing as fast as possible during those warm periods, so the leaves will be thin and susceptible to cool, dry winds when a cold front moves through. The temperature does not have to fall to freezing. The dry winds themselves are sufficient to dessicate and kill thin leaves.

Within a month, we can expect nighttime temperatures to fall low enough that root growth is slowed and root initiation is halted entirely. Once that happens (and until temperatures rebound in late spring), it is useless to remove and plant offsets from most bromeliads before they produce roots unless you can provide artificial heat to the root zone.. During summer, you often have to remove offsets before roots are formed just to keep the offset from overwhelming the mother plant, but, during winter, harvested offsets without roots tend to sit listlessly in their pots. They rarely produce roots before the return of spring, and they don't start to grow until roots are formed.

Within a month, we can expect nighttime temperatures to fall low enough that root growth is slowed and root initiation is halted entirely.

When you do find an offset with visible roots, it is usually safe to remove and repot. Already formed roots seem to grow adequately during our winters, and these offsets will continue to grow (slowly) throughout our normal cold weather. If you are unlucky enough to pot up a offset just before a really cold spell (this will, of

course, always occur right after you have taken an extremely valuable offset), it might be wise to move the pot indoors for a day or so. Once the nighttime temperature returns to the seasonal average, put the plant back outside.

Beyond these generalities, you need to learn what plants in your collection need most protection from cold Surprisingly, *Vriesea* (including *Alcantarea*) and *Nidularium* species and hybrids are among the more cold hardy bromeliads. Also particularly tolerant are species in the Ortgiesia subgenus of *Aechmea* (*Ae. gamosepla*, *Ae. comata*, etc.) and many species of *Billbergia*. Unless we are expected to have temperatures in the 20's, these plants don't need particular protection. For more information, you should consult a detailed list of cold hardy bromeliads published by Tom Wolfe and Eileen Kahl in the Feb 2007 issue of the Florida Council of Bromeliad Societies quarterly publication.

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On the other end of the spectrum, *Aechmea fulgens* and its relatives are famous for showing cold damage when temperatures dip into the 40's. *Cryptanthus* species and hybrids are also very susceptible to cool temperatures. Again, a freeze is not necessary _ in a single night, cool dry winds in the 40's are perfectly capable of turning a plant ready for the show table into something that looks like it just came off the compost pile. Plants in this group greatly benefit from being grown next to your house throughout the winter. Heat from the house walls helps keep the air temperature slightly higher, and the house often provides protection against the cold winds. In a perfect world, you would be able to place sensitive plants against the south end of the house for winter. If you have a courtyard in your house, it is even better. In the imperfect world, you can still gain some benefit from having your plants next to the house in other exposures.

Most bromeliads fall between these extremes. They show visible damage when frost forms on the leaves (this can occur with temperatures a few degrees above freezing). You can protect these plants from frosts and light freezes by covering them with sheets of lightweight material overnight. The sheets will slow the rate of heat loss by radiation from the plant and its immediate surroundings, keeping the air temperature higher than it would otherwise be. If you use plastic sheets for this purpose, remember to remove them promptly in the morning or risk losing your plants to heat damage if the sun shines directly on the covered plant for any length of time. Usually, bromeliads growing under tree canopies (shade trees, not palms) do not need extra covering. The leaves in the tree canopy act effectively like a blanket.

"You can protect these plants from frosts and light freezes by covering them with sheets of lightweight material overnight. "

Plants grown for the show next spring should be given a little extra care. Grow them near the house, even if they are not particularly sensitive to cold. If a really cold spell is predicted, take the time to move the plants into a completely sheltered location – even into your living room. Then, do not keep the plants inside any longer than necessary. As soon as the temperatures return to seasonal normals, place the plants back in their original locations outside.

"Plants grown for the show next spring should be given a little extra care. Grow them near the house, even if they are not particularly sensitive to cold."

Winter, aside from a few days when it really seems cold (although any northerner will laugh in your face if they hear you say so), is the nicest season for humans in southern Florida. With a little attention to their changing needs, you can also make it a fine season for your plants.

Coming Events
NOVEMBER 13TH - 15TH, 2009
FCBS Bromeliad Extravaganza
Hosted by the Bromeliad Society of Central Florida
Renaissance Orlando Hotel Airport
5445 Forbes Place, Orlando

NOTE: If you go online and order as a Florida resident rates are lessened and parking is free. Handle this disparate charge accordingly.