CALOOSAHATCHEE BROMELIAD SOCIETYs CALOOSAHATCHEE MERISTEM

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June 2009

CALOOSAHATCHEE BROMELIAD SOCIETY OFFICERS

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HOSPITALITY	**Mary McKenzie ; Sue Gordon**
SPECIAL HOSPITALITY	**Betsy Burdette (betsy@burdetteinc.com)**
RAFFLE TICKETS	**Greeter/Membership table volunteers - Dolly Dalton, Eleanor Kinzie, etc.**
RAFFLE COMMENTARY	**Larry Giroux**
GREETERS/ATTENDENCE	**Betty Ann Prevatt, Dolly Dalton (dollyd@comcast.net), Luli Westra**
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FM-LEE GARDEN COUNCIL	**Mary McKenzie**
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In the Jan-Mar 2009 issue of the Cryptanthus Society Journal, this bigeneric hybrid of *Cryptanthus microglazioui and Orthophytum navioides* was registered. This unusual cultivar was created by Nat De Leon of Miami. The front cover shows the attractive inflorescence of this bigeneric; while, the mailing page demonstrates the branching of the stems, which prompted Steve Hoppin to name this hybrid - *xOrthotanthus* 'Blazing Bonsai". Photography by Steve Hoppin.

THE CALOOSAHATCHEE BROMELIAD SOCIETY

MEETING TIME AND PLACE:

May Meeting Sunday June 21st 2009

ST. JOHN the APOSTLE CHURCH 3049 McGREGOR Ave. FT. MYERS.

DOORS WILL BE OPEN AT 12:30 FOR SETUP.

MEMBERSHIP SALES WILL NOT BE PERMITTED

at the June Meeting.

Friendship plants, Raffle items are always welcome.

There will be a Door Prize and Show and Tell

June Program

"Landscaping with Bromeliads"

By Peter Kouchalakos

Peter is a native of Coral Gables (Miami) Florida. Formally an attorney; he now works as a Code-Enforcement Hearing Officer for Miami-Dade County. As a long time member of the Bromeliad Society of South Florida, he has served as their President. The Florida Nursery, Growers & Landscape Association , which has been in existence in Florida since 1952, has certified Peter as an Accredited Horticultural Professional. With his years of exhibiting, growing bromeliads and landscaping experience, his presentation promises to be very interesting; so make time to attend our June meeting.

June Workshop (starts at 1:15PM)

"A Grower's Perspective on Sowing Bromeliad Seeds."

By Dale Kammerlohr

Dale, who happens to be a professional hybridizer of new clones of vegetables (remember all those extraordinary peppers), has agreed to give up some of his secrets to starting bromeliads from seed. If, the many of his own new bromeliad cultivars, which he has brought for "Show and Tell" are any indicator, he has been quite successful in this area. Come prepared with questions about growing bromeliads from seed and creating new hybrids.

The Caloosahatchee Bromeliad Society is an active Affililate of:

FM-LCGC | **Cryptanthus Society** | **Bromeliad Society International** | **FCBS**

Society News

Editor's Note

Some of you knew that I was your Regional Bromeliad Society International (BSI) Director for two three year terms up until January of this year. During that period, besides my responsibilities to the BSI Board such as attending meetings, participating in on-line discussions and serving on various Committees, I have tried to educate the Affiliate membership about the BSI and have encouraged individuals to join and become involved with this international organization.

At meetings I talked about the BSI and the benefits of membership. I have included articles in our Newsletter - The Meristem both written by myself as well as by BSI Officers about the workings of the BSI. Also in past issues of the CBS Yearbook, I have included a description of the BSI and its function.

If you didn't know, let me inform you now that the Caloosahatchee Bromeliad Society is an Affiliate Society of the BSI and has been so for nearly 30 years. This distinction is not just given to any Plant Society.. A Society, which has involvement with bromeliads as part of its activities can petition the BSI for affiliation. To become an Affiliate Society every Officer of the Caloosahatchee Bromeliad Society must be a paid member of the BSI. For our $25 Affiliate's fee, our Society gets the outstanding, full color Journal 6 times a year. Free plaques for our Show (a $40 dollar value), discounted medallions and entry cards for our Show are available on request. Another one of the major services provided by the BSI is the standardized training of Bromeliad Judges, who volunteer to judge our Shows.

As individual members, for the cost of $40 for an annual subscription you are sent the Journal six times a year, you are entitled to a discount of between $40-80 off the registration fees for World Bromeliad Conferences depending on when you register and access to the BSI web site including the "members only" areas. These password protected on-line areas include a complete roster of the BSI Membership, species binomial and cultivar registrations' listings as well as access to past volumes of the BSI Journal beginning in 1951. (Currently Volumes of 1951-1986 and 2007-2009 are available with more scheduled to be added soon.) An ever changing

list of bromeliad seeds are available for exchange or purchase at $1 per packet from the Seed Bank. Besides these there are so many other benefits, for example - the Bromeliad Identification Center, Harry Luther, Director, at Selby Gardens in Sarasota, where for a small fee ($5) Harry will try to identify your unnamed bromeliad species. For a complete list of services available to members go to www. BSI.org and peruse the menus.

For what you get, $40 is not excessive, but if you are still not sure if you want to join, check out the Journals in our library. Also the CBS has a gift for first time subscribers to the BSI to entice you.. The CBS will pay half of the cost of your first year membership for your new subscription. After the first year if you wish to continue and I'm sure you will, rates will be $40 with a discount for multiple year subscription. For less than 40 cents a week, you can enjoy the benefits of the Bromeliad Society International. (BTW- a similar deal is available for the Cryptanthus Soc.)

For your discount see Betty Ann Prevatt at the next meeting or e-mail her at bprevattpcc@aol.com. By the way Vicky Chirnside of our Society was elected to serve as your new Regional BSI Director. If you have any questions or suggestions for the BSI, please contact her.

Bus Trip to the FCBS Extravaganza

Special Projects Chairperson Gail Daneman is trying to determine the feasibility of a one day bus trip to Orlando to attend the Florida Council of Bromeliad Societies' Extravaganza on Saturday, November 14th, 2009. There are several activities, which you will be able to attend, including Seminars and the Sales. There is a minimum of riders necessary to make this trip financially feasible. If you are interested, please contact Gail at 239-466-3531 or (bob@fesq.net). You can also see her at the meeting.

The 2009 Caloosahatchee Bromeliad Society's Show and Sale

As of the last CBS meeting, Steve Hoppin has taken over from Ross Griffith as Chairman of this year's Show. Betty Ann Prevatt will remain as Co-Chair of the Show and Brian Weber as Chair of the Sale. He has not selected a Co-Chair as of this printing. Since assuming the Chairmanship, Steve has been busy contacting members to serve as Chairs of the various Show Committees. In turn these Chairs will be asking for Co-chairs and/or committee workers. There are still several positions that need to be filled; so if asked please volunteer your services to make this year's event an overwhelming success.

May Workshop

Thanks to Steve Hoppin for his Workshop spotlighting the division and separating of offsets from our bromeliads. It is unfortunate that there is never enough time to cover all aspects of a topic at these workshops. With important topics like the one covered by Steve, I like to print articles to follow up on the discussion and demonstration.

Odean Head of Houston Texas has for several decades provided articles, programs, workshops, seminars and demonstrations concerning bromeliad culture and care. One such article, which has been revised by Odean many times and has been reprinted in numerous newsletters, deals with offset removal. This particular version was taken from Odean's home Society's newsletter for which he is a regular contributor. BS/H, Vol. 38 No.3, March 2005.

Bromeliad Expose By Larry Giroux

CULTURAL TIPS -Pup Removal
By Odean Head

We have discussed pup removal so many times over the years and each time it seems that we come up with some new situations that should be considered in making our decisions as to when, why, if and how to remove pups. Since most bromeliads have a limited life span that includes blooming only one time, their propagation is very important in order to maintain our collections. We will discuss some of the criteria that should be used in solving the questions raised above.

THE BEST TIME TO REMOVE PUPS

The most special plants in our collection rank the highest when it comes to propagation. The plant will normally make more pups when they are removed as soon as they can safely be removed. Some slow release fertilizer on the mother during its pupping cycle can also produce more pups and cause the pups to grow faster. Usually they are old enough when they become one-third to one-half the size of their mother. The pup will grow faster as long as it is on its mother and if we are more interested in maturing the pups than obtaining more pups we will leave them on.

This may be the case when the pups grow on stolons long enough to provide space for the plant's normal conformation. This will slow down propagation but can form some pleasing clumps. Pups that do not have long enough stolons should be removed before their conformation is ruined. However, those that are allowed to remain attached could form attractive multiples. In this case, conformation would apply to the entire display rather than the individual plants.

We can remove and pot pups anytime of the year. I prefer to wait for warmer temperatures when root development will be faster. The mix tends to

stay wet longer in lower temperatures and with no roots to take the water into the plant, the chances of rotting increases. This is especially true with plants that have tender caudexes such as vrieseas and guzmanias. In fact, I am more cautious with these pups year round. First, I usually let them grow a little longer on their mother, then I let the removed pup's caudex harden before I pot: it. Some people also use RooTone as an extra precaution against rotting.

Some vrieseas will have only one or two pups that form and come up through the middle of the mother plant. Since these may be the only pups that the mother will have and it is pretty much destroyed when removing the pups, you should allow the pups to grow to full size and remove the mother as her leaves die. This almost guarantees the survival of the pup or pups and they will mature faster. If more than one, they can be separated when their roots are established.

PUP REMOVAL

Removing pups can be an easy task unless you have never done it. It is normal to be a little apprehensive the first few times you cut a pup, especially when it is jammed up next to the mother plant, for fear that you will damage one of the plants.

The pup should be severed somewhere between the pup's roots and the mother plant. I use three different methods for removing pups. Most of the time I will use a pair of hand snippers when they are available and there is plenty of room between the pup and mother to make the cut. Sometimes the pup will just snap off when I place the thumb of one hand against the base of the mother plant and apply some side to side pressure to the pup with the other hand. Be careful that you do not apply so much pressure that it breaks too close to the pup plant. When this happens, use your rooting hormone to harden it off before planting. There are times when the plant is so close to its mother that you cannot get to it with snippers and it does not respond to the hand method. In these cases you need a good sharp knife to cut it off. A serrated knife is usually more effective when a sawing motion is needed. Take a long knife with a sharp point and stick it down into the leaves until the point of the knife rests on the spot where the pup connects to the mother. Apply some pressure and with a little twisting motion *try* to pop the pup off. If it does not pop off after a few tries you may have to use a sawing motion to sever it. This procedure would also apply to many of the large clumps of tillandsias. Un-potting the plant can sometimes make it easier to see where to cut.

Cryptanthus pups that grow between the leaf axils on top of the mother should be removed when of good size. A little side to side movement will cause these pups to release when they are ready. If they do not release easily, let them grow a little larger before you try again.

Most tillandsias form pleasing clumps even when the pups are not stoloniferous. I will usually wait to split mounted tillandsias until they get real crowded.

Houston, Texas

Aechmeas such as this *Aechmea recurvata* 'Big Mama' are among the easiest bromeliads to divide. The offsets usually develop from the caudex or base of the plant or on a short stolon. Using a sharp knife or shears remove the pup from as close to the mother as possible. As with most bromeliads wait until the pup is 1/3 to 1/2 the adult size before removing it.

There are now hundreds of varieties of pineapple plants. This *Ananas comosus* 'Mongo' is very generous with offsets, even before it blooms. The first pups develop from the base and are removed the same as are aechmea pups. After blooming you get offsets from the base of the fruit, the base of the top rosette and of course the top can be twisted off for another pup to plant. The offsets from around the fruit should be allowed to "harden off" before planting to avoid the fleshy parts from developing fungus when stuck in damp soil.

In the late 1980's and early 1990's, previous CBS member Don Beadle produced hundreds of billbergia hybrids. Years later Michael Kiehl purchased Don's nursery in Venice Florida. At the totally renovated facility, Michael's Bromeliads still has all of Don's cultivars including many unnamed ones, which are occasionally released. The beautifully patterned *Billbergia* 'Sangre' seen here was one of Don's earlier creations, released about 1987. Offsets of this genus are also very easy to remove. Of course this pup is still much to small to be separated from its mom.

Bromelia flemingii **is one of the smaller species of this genus. It also develops the red center leaves and large blue-purple flowers typical of many *Bromelias*. Larger, more common species include *B. pinquin* and *balansae*. With their 3-5 foot long spined leaves, planted rows of them are actually used as fences in Central and South America to contain cattle. In my yard *B. balansae* became a nuisance and had to be removed. The same long stolons typical of this genus, which makes it easy to divide, resulted in the spear-like offshoots popping up several feet away from the mother plant in the grassy portions of my yard, making it dangerous to walk barefooted or in flipflops.**

Most of the cryptanthus hybrids and particularly the species such as *C. bivittatus, ubairensis, correia-araujoi* and *acaulis* (seen here), seldom need more than a twist or tug on the offset when they are ready to be removed. There are several other crypt species, which develop pups at the end of long stolons. In habitat this permits them to travel until they reach a niche of soil to set roots. I like to keep these offsets on the mother rather than cutting them off in order to create a hanging basket of plants.

Dyckias, hechtias, encholiriums and puyas are for me the most difficult to divide. I'd rather keep them as a clump or give them to someone else to separate. Single dyckias often divide into two plants; separating them requires spliting the plant down the middle including the common root stalk. Other dyckias and the other terrestrials mentioned above will form offsets from the base of the mother, as in the case of Dyckia 'Brittle Star F3' seen in the photo. The trick to separating appropriate sized offsets is to fill a large cardboard box with crinkled newspaper. Tip the plant upside down, so the spiny leaves are cushioned by the paper. Do not use cloth towels because the spines get caught on them. Next pull the pot off and saw between the root balls of the individual plants. Just be sure you get roots with every plant. All photographs by Larry Giroux.

As mentioned earlier, some dyckias split as seen here with Dyckia platyphylla x 'Carlsbad'. Timing is important with regard to dividing these Siamese twins. Wait too long and the separated plants may be too badly deformed in their symmetry to recover. In addition please be sure to provide good portions of roots to each plant when you divide such a plant.

The next unnamed dyckia hybrid can easily be separated from its pups by cutting each offset as close to the mother as possible. This maneuver can probably be done from the top unlike the clump of the next dyckia pictured below left. This clump probably started out with pups developing from the base as in the second picture, but now it is one interwoven ball of spiny leaves. Any attempt at separating these plants from above will definitely damage many leaves. Dividing these plants from the bottom is the preferred choice. This plant is Dyckia 'Brittle Star' F2.

For those who don't know what F1, F2 or F3 means let me explain. "F" stands for Filial which means basically offspring, like a son or daughter. In

horticulture it is used with a number after it, such F1 or F2, etc. F1 means the seedling which result from the first (1) crossing of two plants. Each of these seedlings are unique with a mixture of the two parents' genes, just like each human is unique. With bromeliads, each seedling when mature could be given its own name to denote it as a new cultivar. An F2 cross is that created by self-pollination of a plant or by the crossing of plants from the same grex, thereby having common parents. F3 progeny occur from the self-pollination of F2 plants or plants of the same F2 grex.

Hechtia meziana and Puya laxa **are examples of their respective genus, which are divided the same as dyckias depending on how dense is their clump in the pot. This unnamed deuterocohnia is growing into a mound gradually covering older plants as do many of this genus. Separation is as easy as breaking off a plant.**

Photos by Larry Giroux. Many of the plants seen here are from the collection of Brian Windham of Kenner, Louisiana.

Pitcairnia **'Beaujolais' is a good example of the way plants of this genus sends out offsets. A single plant can develop into a clump that will fill its container. To divide it you need to use a hand saw and cut between plants. With a pot full this dense it is best to divide into quarters and plant each clump into a large pot and let it fill the pot before dividing again.**

Many tillandsias such as *Tillandsia ionantha* pictured here are more attractive left as a clump. While, the larger tillandsias such as *Tillandsia dasylirifolia* with its large rosette of leaves and a 5 foot spike should be planted individually in a heavy pot. This tillandsia is unique with its offsets developing along the spike. This of course makes removing the pups quite easy. All photos by Larry Giroux.

Greetings,

Since Aechmea chantinii is a plant of great interest to me, I have decided to remain on that subject for another month. This subject also allows me to make some tentative moves towards developing tools for identifying plants of particular interest to the project.

We can anticipate that many of the plants we seek will be in backyard collections where the name tags have long since disappeared. Therefore, we need to be able to identify the plants on their own merits. In time, the toolbox should include keys and descriptions of the various clones, as well as photographs. (Photographs alone will not be sufficient for many groups.)

I am afraid it will take a lot of work to understand even a small group, such as Aechmea chantinii, but it is still possible. Unfortunately, if we wait too long that may no longer be the case with many groups of bromeliads. The idea behind making the project a statewide effort was to combine resources to make a rather imposing task easier. We are still trying to find the best way to harness these combined resources efficiently. If you have any suggestions, please let us know.

Thank you.

Alan Herndon (AlanHerndon@aol.com)

Clone preservation project update - June 2009
By Alan Herndon

I would like to concentrate on the *Aechmea chantinii* group this month, trying to define some of the characters that may be useful in differentiating the various cultivars. Since I have only a few of the named cultivars in my own possession, and most of them are not in bloom right now, I cannot offer detailed discussions of individual cultivars. (The full list of named cultivars is given in the May update.) Rather, my understanding of the characters is based on study of the seedling swarm produced by Altria plants. I suspect the range of variation seen in the Altria seedlings is at least as large as that among the named cultivars.

We should start with the non-reproductive parts of the plants. First, we should note that there is a great range in mature size among the clones. The cultivar 'Dwarf' usually has a leaves under 12 inches long (in my collection), while many cultivars have leaves exceeding 30 inches in length.

The most striking feature of *Aechmea chantinii*, of course, is the banding of the leaves. The white bands, that typically stretch from side-to-side of the leaf, are created by the overlapping heads of peltate trichomes. Between the white bands, where the trichomes are scattered or entirely lacking, the ground color of the leaf blade is evident. The ground color of the leaf may range from a bright, dark green to a very dark violet. Banding patterns vary widely among different clones of the species. Bands may be irregular in width or they may be substantially equal in width. The white band may be much

narrower than the band of ground color, or much wider. In the Cultivar Registry, the former is described as green/black banded and the latter is described as white banded. When the white bands and green/black bands are about equal in width, they can be described as evenly banded. You can have even, narrow bands or even, wide bands. Another distinction can be drawn between plants where the white bands contrast strongly with the bands of ground color (strongly banded or well-marked) versus plants were the contrast is much less. Also, plants may have distinct bands on the lower surface of the leaves, but not the upper. Other plants have distinct bands on both leaf surfaces.

Bands, however, are not always found on plants of *Aechmea chantinii*. At least one cultivar ('Snowflake') presumably is characterized by bands broken into splotches of white. Other cultivars have leaves with uniform white coloration. For instance, the clone of *Aechmea chantinii* forma *amazonica* I have (from Wally Berg via Karl Green) shows no trace of banding. There are also presumably clones with relatively few trichomes that have leaves with an overall green appearance.

Other leaf characteristics, such as width, also differ considerably between clones. Leaf width, of course, is very dependent on cultural conditions. Plants grown under high nutrient conditions will have larger leaves than plants grown under low nutrient conditions. The differences I am talking about are relative. For plants grown under my conditions, the cultivar 'Ebony' has leaves that are rarely wider than 1 inch. Most cultivars have leaves that are close to or over 2 inches in width. Finally, although Aechmea chantinii is characterized by thick, stiff leaves relative to most other Aechmea species, there is notable variation within the complex. The 'Pink Goddess' cultivars are distinguished by very stiff leaves. The leaves on these clones do not bend or arch to a significant extent along their length. Other clones I am familiar with have leaves characterized by graceful arching.

My own experience is that banding patterns in general are passed to successive generations. A plant with bold banding will produce pups with bold banding, etc. Ground color may be more dependent on growing conditions. For instance, the cultivar 'DeLeon' has a dark green ground color when grown with plentiful fertilizer. When grown under conditions of nutrient scarcity (my normal growing environment), the ground color takes on a much darker tone. This raises the question whether cultivars 'DeLeon' and 'Dark DeLeon' are truly distinct. Among clones with a green ground color, nutrient scarcity usually produces a plant with a paler green, often yellowish appearance.

Inflorescence characteristics provide, if anything, even more ways to distinguish potential clones. The large bracts that subtend the lower branches of the inflorescence are typically an orange-red color, but can be pink to yellow to a dark red. Based on what has happed with other species, I would also

expect plants with white bracts to appear eventually. If anyone knows of a white-bracted cultivar (especially if it is among the already named cultivars), please let us know.

The shape of the inflorescence can vary widely from plant to plant (clone to clone?), but I have not recognized any differences that seem to be inherited. Floral bracts (the small bracts that subtend individual flowers) seem to be green in a majority of wild-collected clones, but they frequently are red to a greater or lesser extent many horticultural cultivars.

In most clones, the sepals are green, but in the clone of *Aechmea chantinii* forma *amazonica* I possess, the sepals are red. There is no reason that other cultivars with red sepals could not exist. There is also an apparent variation in the shape of the ovary of different clones. In most clones the ovary at flowering is about as long as thick, but in some clones, the ovary is clearly longer than thick. This appears to be an inherited character, but I can't be sure yet.

I most frequently see flower petals with a uniform yellow color from the base to the tip of the free lobe, but there are also petals with white tips (the white tips appear to be common among the close relatives of *Aechmea chantinii*, such as *Aechmea zebrina, Aechmea retusa* and *Aechmea mooreana.)*. Another variation in the petals is the shape of the petal tips. When in flower, the free lobes of the petal can be straight with the tips barely separated or the free lobes can be slightly curved outward, separating the tips. Flowers with the tips curved out also seem to have stiffer petals.

Using the above characters, perhaps extended as more experience is gained, it should be possible to describe the differences between all cultivars of *Aechmea chantinii* . As an example, I am including descriptions of two named cultivars that happen to be in bloom in my collection right now. As more cultivars bloom, I will publish descriptions. Anyone with a blooming clone is also invited to share their descriptions with the rest of us. It is important to look at several different plants of each cultivar to determine whether they differ in any character. Such differences presumably mean the character is controlled by growing conditions (at least in part).

Aechmea chantinii cv. 'Pink Goddess' (the Jack Holmes clone) has stiff, narrow leaves with bands of irregular width. The ground color is indistinct because the bands, although irregular, cover most of the leaf blade. The large scape and primary bracts are pink. Flower petals have white, outwardly curved tips. The clone collected by Patricia Bullis is a larger plant with the same stiff leaves and banding pattern, but I do not know the inflorescence yet.

Aechmea chantinii 'Tarapoto' (a plant offered by Tropiflora that was collected from the vicinity of Tarapoto, Ecuador) is a large plant. Banding is indistinct, with bands of irregular width. Ground color of the leaf blade is a dark green. The primary bracts are orange-red. Floral bracts are green to yellow. Petals are uniformly yellow and straight.

May Program

If you attended the May Program by Craig Morell, then you were one of the many people that had great things to say about it and said they couldn't get enough about the topic. Gary Nelson, a CBS member forward me an outline of his notes, which he took at the meeting and wondered if they would be worth printing. I contacted Craig about the idea and with his blessing, and after a review and editing from his notes, my notes and addition of some pictures, I'm reprinting Gary's outline.

Many thanks to Craig for his presentation and permission to print recollections from the meeting and to Gary for his work of putting it all down on paper. Additional questions that were not answered at the May meeting can be referred to Craig at cemorell@earthlink.net.

Bromeliad Pesticides/Herbicides

Presented by Craig Morell to the CBS 3/17/09
Outline by Dr. Gary Nelson

Keys points:

1) ID the pest before treating for best results – know what you are trying to kill or manage.

2) eradication not feasible, learn to manage/control effectively (if a pest is short lived and of short duration, consider organic remedies first , then natural progression where pests go away on their own).

3) Monitor indicator plants: Arecas, Hibiscus, & Gardenias – they get affected first. Use them as "sentinel plants".

4) First try least harmful approach: wipe out offending cause and avoid pesticides where possible.

5) And most importantly - If you do use a pesticide, **READ THE LABEL**. The information will protect you, the environment, and your plants.

Assessment: *Assess* the spread of the damage. Look at all the plants and see how extensive the problem is. *ID* the problem or problems. ID to determine if you have an insect, mite, fungus, or non-living problem or a combination. Sometimes the damage is caused by non-pathogenic causes. Then look for a solution as specific to your problem as possible.

General suggestions:

ROTATE through miticides and insecticides to reduce resistance. Rapid reproduction of mites and other infestations occurs at high temperatures and resistance occurs with repetitive use of the same product, on mites, fungi and bacteria.

Most insecticides are TOXIC to bees, especially Avid, Kelthane and Merit.

Scale and Mealy bugs in substantial collections need to be treated systemically.

AVOID: Weed B Gone – chlorinated amines are bad news for bromeliads and will kill many plants downwind from drift spray!

AVOID: Aliette – (Aluminum tris (O-ethyl phosphonate)) useful as a systemic for root rots, but is powerful, and should be used with extreme caution; it can penetrate wood, therefore your skin as well.

AVOID: AVID 0.10% - very expensive; effective and penetrates thorough leaf top to bottom but can cause permanent eye damage!
AVOID: Daconil – can cause immediate eye damage
AVOID: Captan – very toxic, more so than previously thought.

Wear Personal Protective Equipment When Using Systemic Pesticides:

Use Nitrile gloves (green or blue) not latex; Goggles or face shield to protect eyes; Respirator mask ~ $20 at Home Depot; Water repellent apron & boots.

Do not spray on windy days!

Three main pests Bromeliad growers need to be concerned about

Scale, Mealy Bugs, Mites

Mites are in the spider family, therefore *insecticides will not work well to control them.* With thin leafed bromeliads like vrieseas and orchids check under foliage.

Contact Controls i.e. control pests by contact, not from inside out

1) Rubbing alcohol – does well for all three pests; need to make contact so spray from underneath as well; no residual benefits – need to repeat in 2-3 days until gone.
2) Neem Oil – toxic to mites; spores of fungi as well; requires direct contact, dilution of 2 teaspoons per gallon water; organic & biodegradable
3) TetraSan –water dispersible granule, up to 28 day, effects eggs & nymphs not adults
4) ASTRO – Pyrethroids $60/ gal., most pyrethroids are contact-kill only, label says this product is systemic.

Systemic Controls (AVOID skin and inhalation exposure!)

1) Safari –(Neonicotinoid class) – Available at Lesco. Not for mites. Considered "Next generation Merit" – half the cost of Merit - effective for months.
2) Premise – (Imidocloprid) used for termites (Cheaper using termite product) systemic for 6 months, technically used for termites only.
3) Merit – $60 for 2 oz – (Imidicloprid) – Available at Lesco off Metro Pkwy.
4) Bayer Tree & Shrub –(Imidicloprid) very dilute form, but available at retail.
5) Merit (Imidicloprid) - good for Areca Palms prophylactically are effective against thrips, scale, mealybugs)
6) Orthene- (Acephate) good for use against scales, mealybugs, thrips, leafminers, not registered for food crops or mites

For all chemicals---READ THE LABEL !!!!

Currently the best treatment for Evil Weevil, Scale

Marathon (granular Merit)– Ag Supply Co. $125/gal . ¼ teaspoon sprinkled into leaf wells (The space at the base of leaves where water accumulates) – a few granules per well.
Merit (imidicloprid)- water soluble form of Marathon
Safari - (Neonicotinoid)- same class as Merit, but newer chemistry

Sources of Small Volumes of Pesticides:

Mail Order - RoseMania.com and OFE International

"Natural Pesticides"

Lady (Beetles) Bugs; Neem Oil; ground Cinnamon powder on crown rot and bacterial lesions on many types of plants; Diatomaceous earth (aka Fullers' Earth or pool filter earth); Pepper Wax / Pepper spray; Sulfur.

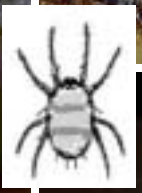
Insecticides:

Bayer's Cease Fire - long duration 6-12 mo for Fire Ant, Mole Cricket, Roach
Orthene – very cheap, systemic effect, stinks – kills all but mites & Chili thrips
Malathion powder is safe to bromeliads, **but the Oil Formulation will kill bromeliads and hibiscus because of the oil**.

Herbicides:
1) Ornamec – kills grass without killing hedges or bromeliads! Trial small area to test effectiveness.
2) Sedge Hammer for nutsedge (a Halosulfuron – methyl 75% Gowan Company).
Fungi – reduce likelihood of infestation with good air flow, more light, repot into new media.
Manzate – old stand by – Mg & Zn – contact fungicide, NOT for root rot
BanRot – thiomyl + etridiazole combination
Armada – $45/200 gal supply- for root rot – safe for orchids and bromeliads broad spectrum - treats 5 orders of fungi
AVOID: Copper & Lime and Sulfur – KILLS BROMELIADS
Black soot – wipe off with soap & water (leaves sweat sap drawing fungi & insects) also a sign of insects on something above the plant
Botaniguard ? – ok for African violets & Impatiens – dose when planting
Collar Rot – brown ring at base of bromeliad- use a systemic fungicide labeled for the problem-
Medallion works ~ $100/100 gal – only for 1 fungus
Heritage – very effective fungicide – very expensive
Bayleton or Heritage (Fertilome or High Yield) granular at Driftwood for Plumeria Rust Fungus.
Snails: Use iron based products if pets or children are at risk.
Deadline Snail Bait- use in areas where no pets or children are present.
Escargo- iron phosphate based, safe for pet and kids
Diatomaceous Earth (silica –eg. ground glass) Pool Filter Supply. Dehydrates, also controls roaches. However, once it rains it is gone apply to bromeliad cups for control of water drinking raccoons (hate it)
Sevin insecticide (Carbaryl, methocarbamate) effective, but pollutes environment; raccoons hate it, too.
Miscellaneous:
Epsom Salts (Magnesium sulfate) – cheap at Wal Mart – greens up plants
just toss on plants as a powder and water it in.
ALWAYS READ THE LABEL and always be concerned about your health before your plants' health!

Read the Expanded Newsletter

I have been asking members who have e-mail, if they can start receiving the Meristem exclusively by e-mail and I have gotten a good response from the membership. I want to remind the members that even if they can not receive the e-mail version mainly because they have dial-up internet service, they can still go to www.fcbs.org and read the expanded Meristem directly online. The June issue has additional pictures of bromeliads and how to divide their offsets, submitted photos and the monthly update of the Clone Preservation program from Alan Herndon. Go to www.fcbs.org to view this expanded electronic issue, if you are not already opting to receive it.



The included pictures are of some of the pests discussed by Craig Morell. Top left shows Black Speck Scale (also referred to by several other names). Here it is seen on both the top and bottom leaves of an *Aechmea fasciata*. It is difficult to kill and even after it is treated, it continues to adhere and requires manual removal. After removal, pale spots where the juices and cellular components have been sucked out of the leaf, are often prominent. Lower left shows a combined infestation of Soft Brown Scale and a patch of Mealy Bugs on an alcanterea leaf. This type of scale generally responds easier to treatment and wipes off or washes off also easier that the "Black" form. Mealy bugs (close-up of a mealy bug is seen in upper right photo) can be treated by several safer topical treatments including isopropyl alcohol wiping. The tell tale signs of spider mites is miniature webs or silky strands running between leaves (see picture above). The drawing here demonstrates how they resemble spiders with four pairs of legs and no antennae. The adult cream or reddish colored mite is only 1/50th of an inch in length, so a magnifying lens is necessary to see these pests on your plants; the tiny white dots among the web strands are these tiny pests. Photos and drawing by Larry Giroux.

Bromeliads at Epcot

Got these pictures from Geri Prall showing the use of bromeliads in topiaries at Epcot in Orlando Florida. At the China Pavilion A dragon made up of neos is swimming in the lily pond.

The Disney character Daisy is standing with her friends- proud as a duck??. Their bodies are completely adorned with various tillandsias. While a topiary Tinker Bell floats above a rock casting her magic on those below.

Photos by Geri Prall.

Minutes of the May 17th, 2009 CBS Meeting

Minutes of the May meeting were not available prior to printing of the Newsletter. Luli Westra will read the minutes or the reading of the minutes may be waved by vote at the next meeting. Anyone requiring a written copy of the minutes may inquire about them from the CBS Secretary at the meeting.

Welcome to New Members

Janice Schmidt
2344 Pellam Blvd.
Port Charlotte, Fl 33948
xxx-xxx-xxxx
TILESCHMIDT@AOL.COM

Nat DeLeon
11000 SW 77 Ct. Cir.
Miami, Fl 33156-3765
xxx-xxx-xxxx
NATEILE7@AOL.COM

Volunteers are Needed

In February a group of CBS members spent an entire day to plant, mount on trees and mulch a bromeliad garden on the grounds of the Lee County and Fort Myers Garden Council Complex on Virginia Ave. Fort Myers. Our garden is the most elaborate and according to the feed back from visitors to the garden, the most attractive of the several Garden Societies.

It has been several months since we have installed the plants and we need volunteers to occasionally check out the area, pull obvious weeds and remove dead plants. You do not have to do everything at one time, you can do it at your leisure and as an incentive, the mangos are ripening and you can help yourself to as many as you can pick. To obtain the lockbox code to get into the Garden please contact Mitzi Marckesano at couponqwn@hotmail.com or call her at (239) 561-5513

Terry Park,
Fort Myers.
Judged Standard BSI
Show on Friday,
December 4th 2009
Show and Sale open
to the public
Saturday, Dec 5th
& Sunday, Dec.6th

Calendar of Bromeliad Events

June 13th, 2009

Edison Summer Garden Market under the Shade of the Historic Trees. Local vendors selling orchids, roses, tropicals, bromeliads, palms, herbs, cactus and succulents, honey, vegetables etc. It is June 13th on Saturday from 9-5. Free to get into. It will be in the parking area near the café.

September 25-26, 2009

The International Cryptanthus Show and the Southwest Bromeliad Guild Show is being hosted in Baton Rouge, Louisiana by the Baton Rouge Bromeliad Society. For additional information contact Steve at steveandlarry@comcast.net.

November 13-15, 2009

The FCBS Bromeliad Extravaganza, hosted by the Bromeliad Society of Central Florida, will be held at the Renaissance Orlando Hotel Airport in Orlando Florida, Sales, Seminars, Tours, Banquet and Rare Plant Auction. Information to follow.

December 4-6, 2009

The Caloosahatchee Bromeliad Society's Show and Sale, Terry Park, Fort Myers, Florida. Judged Show on Friday with Show and Sale open to the public Saturday Dec 5th- 9AM-5PM and Sunday 10AM-4PM.

December 20, 2009

The CBS Holiday Party

July 26-August 1, 2010

The BSI World Bromeliad Conference - Bromeliads in the Big Easy (Astor Crowne Plaza - New Orleans). "Catch the Fun".

Caloosahatchee Bromeliad Society
3836 Hidden Acres Circle N
North Fort Myers, Fl 33903
E-mail - DrLarry@comcast.net

TheJune Meeting Speaker is Peter Kouchalakos of Miami, Florida. Besides presenting his program, he will be bringing plants for sale. See inside for details of his program Members, please invite your family and friends to attend.