



April 2010
BSSF Officers 2010

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 Arbelaez**

**Raffle: Peter & Clara
 Kouchalakos**

Refreshments: Patty Gonzalez

What	Who
Sales Table	Antonio Arbelaez

APRIL , 2010, 7:30 PM

SPEAKER: – Numerous parties will attend to instruct members on how to prepare for the show.

RAFFLE TABLE: TBA

Food will be provided by the usual suspects and Joy Von Wald, Joan Manley and Barbara Sparling

Calling for Award Sponsors

Anyone wishing to donate money for an award for the Annual Show, need only contact Joy Parrish. E-mail OWENJOY@aol.com or giver her a ring.

SPECIAL THANKS: Karl & Kris Green, Anne Kauffman and Tom & Nancy Steinmetz for donating crystal to this year's show.

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In Case You Missed It by Robert Meyer

If you missed it, then you were not in bad company. So did I. I had an engagement with my daughter's college class in the Miami Arena, and to be truthful, it was more unique than Alan's talk – her classmate from a school of 1700 plays NBA basketball and we were asked to meet him when playing the Heat. But, through hearsay evidentiary device [hearsay = verified information heard or received from another; rumor] I can attest to the unfounded fact that the talk was great. Now for my segue.

I visited four places on Saturday which proved that Alan was partially correct. Dr. Block's home still is about a million times more magnificent than most others, but he suffered damage to the hanging bromeliads high in the screened-in enclosure adjoining his living area/kitchen. And, not unsurprisingly, two cold hating palms – *Cyrtostachys lakka* or *Cyrtostachys renda* (sealing wax and renda for short) – were affected. But, to my amazement, he still has many stalks alive – something I never could do with much less drastic weather change.

Secondly, I visited the Pinecrest Gardens. Amazingly, their tremendous heliconia and crocus crops may be forever thinned. They are not very receptive to cold. And, the crowd that attended to help that garden filled it resplendently where the heliconia and others had earlier this year bid farewell.

Thirdly, I visited a bamboo nursery where the leaves were brown, but emerging with green. They are in open sun and in the ground. It appears that the crop will survive.

Lastly, I visited Alan and Rhonda Herndon's nursery – Tradewinds Tropicals. I go there on more than rare occasion, but even my knowledgeable eye could not see the drastic problems that they encountered. But, they aver to loss of extreme measure, so I must accept their nonhearsay statements; and, if do doubt – would accuse them of heresy: something I could not.

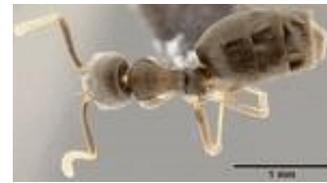
In short, there is damage. But, just how much we will need wait another month or two to fully understand.

ANTS AND BROMELIADS by Alan Herndon

When working with bromeliads in your garden, you have undoubtedly run into ant colonies inhabiting the occasional plant. You will particularly notice our large, red-orange Carpenter Ants, *Camponotus floridanus* (also called *Camponotus abdominalis floridanus*), swarming out of a plant while you are trying to remove dead leaves. Even more impressive is an eruption of Imported Fire Ants (*Solenopsis invicta*) from the soil in a pot you are trying to weed. You quickly learn to recognize the mounded appearance of potting soil inhabited by Fire Ants (as well as the presence of potting soil in the lower leaf axils – well above the original soil level. You might also sometimes note a hoard of brown or black ants running rapidly and wildly about on the plant (*Paratrechina* sp.), slowly moving black ants (*Technomyrmex*), or an army of small

yellow ants (*Pheidole* sp.). Although, you might be less inclined to notice these ants after realizing they do not have the blood lust of the two previous species.

In the tropics, there is an even stronger relationship between ants and bromeliads. When you read accounts



Technomyrmex Photo care of keys.lucidcentral.org

of bromeliad collecting expeditions, there is always a story about the innumerable, ferociously biting ants defending a particularly desirable plant. In large measure, the more frequent association

between ants and bromeliads in the tropics arises from the greater diversity of ants in the tropics, in particular the large number of tropical ant species that live in trees. Epiphytic bromeliads provide a convenient platform for nest construction by these arboreal ants.

Some species of *Tillandsia*, characterized by outsized leaf bases that form loose pseudobulbs, are especially adapted to hosting ants (*Tillandsia bulbosa*, *T. caput-medusae* and *T. streptophylla* are examples commonly seen in our collections). In their homelands, virtually every plant of these species is home to a nest of tree-dwelling ants. In these cases, we can imagine a harmonious partnership between ant and plant where the bromeliads provide shelter for the ants and the ants reciprocate by bringing extra nutrients (in the form of small quantities of soil or ant food) into the bromeliads that are growing in a generally nutrient-poor habitat. Of course, we can't actually ask either the ants or plants how they view the relationship, but we take comfort in having a nice story to fall back on.

A small group of *Aechmea* species (including *A. brevicollis* and *A. mertensii*) are typically found growing on large 'carton' nests of tree dwelling ants. These carton nests are constructed using chewed plant fibers – basically a rough, thick grade of paper. Several species of epiphytes, including the *Aechmea* species mentioned above, are found so frequently on such nests and so infrequently off the nests, that they form what are called 'ant gardens'. In fact, there are observations of ants actually placing seeds of these species on their nests, as if they were deliberately starting a garden. Again, we can't know what the ants are doing, but the story is certainly appealing.

In most cases, the ants we find in our local gardens are ground-dwelling species inhabiting temporary brood chambers in convenient bromeliads. They set up in a nice, moist, protected space between leaf bases. By sticking to old leaf bases, they can even avoid the inconvenience of being flooded out with every passing rain shower. In the meantime, while the larvae and pupae are raised in the



Solenopsis invicta. Photo care of biology.duke.edu

comfy confines of the bromeliad, the rest of the colony, including the queen, is safely ensconced in the permanent nest some distance away.

In other cases, the presence of ants in our bromeliads is less benign. The ants are tending (and protecting) food sources (such as scale insects or aphids) and, to ensure a continued supply of food, spreading the insects. The most obvious sign is usually a parade of ants on the inflorescence. A closer look will reveal (almost always) aphids on the flowers and flower buds. Species of *Pitcairnia* seem to be particularly susceptible, but I have also seen several aphid infestations (with attendant ants) on inflorescences of *Aechmea chantinii*. It should be noted that in these cases, you don't need to treat the ants directly. Treat the aphids or scale insects. Once the food source is removed, the ants will disappear.

Scale insects or mealy bugs can also feed on the roots of bromeliads grown in pots, and ants could farm those insects. Indeed, this may be the reason imported fire ants occasionally take over pots from otherwise innocent plants. I have not yet been sufficiently interested to fight through the hoards of fire ants and examine the roots.

Despite our tendency to notice them only when they interfere with our activities in some way, ants are interesting in themselves if you take the time to learn something of their habits. You have to deal with the small size of most ant species (i.e., get used to using magnifiers and microscopes to study them), but, given appropriate magnification, you will find exquisite detail in their structure.

Give it a try. Rather than treating every sighting of an ant as a reason for the urgent application of insecticides, spend some time observing the behavior of ants alone and in groups. (You will soon learn when an urgent application of insecticides is actually necessary to protect life and limb.) Not only will you help save the planet from the overuse of poisons, you might find a new interest to go along with your love for bromeliads.

WORD FOR THE ARTICLE: **myrmecophyte**: (Bot.) A plant that affords shelter and food to certain species of ants which live in symbiotic relations with it. Special adaptations for this purpose exist; thus, *Acacia spadicigera* has large hollows thorns, and species of *Cecropia* have stem cavities. [Webster's Revised Unabridged Dictionary, published 1913 by C. & G. Merriam Co.]

SPRINT TO THE FINISH

By Alan Herndon

It is time to speed up our preparations for the fast approaching Annual Show. Following are some random thoughts you may need to consider as you make your final preparations.

If you are thinking about volunteering to help with the show, you need to do so soon. BSSF members who are not also members of Fairchild need to have their names on the list of volunteers submitted to Fairchild a day or two after

the upcoming general meeting. People on the list are allowed to enter Fairchild without paying the normal entry fee during the course of the show.

If you have been preparing your show plants throughout the year, you are way ahead of the game. If not, start now. Remember that your primary aim is to have all of your plants meet the requirements for an Award of Merit ribbon (AM). You have no chance of winning the AM unless your plants are clean. This means no dirt, leaf bits or algae in the leaf axils and no visible scale infestation anywhere on the plant. If you are unsure how to clean plants or what to look for, pay close attention during the next general meeting. Our entire program will be on preparing plants for the show.

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Entry forms and Show Schedules will be available at the general meeting. Remember to pick up your copies. You don't really need the Show Schedule unless you are making a serious run at the Sweepstakes award. If you aren't at that level yet, but are interested in trying sometime in the future, it would be worth your while to start familiarizing yourself with the definitions used to classify entries into the various Sections of the Show. We will be using the same Show Schedule as last year (actually, the last 3 years), so if you can find your old copy, use it. Just make sure your copy says "Rules: (effective 2005)" at the top of the first page.

Some of the rules in the Show Schedule may not be evident without careful reading. Remember that plants entered as multiples in the Blooming and Nonblooming Divisions must have all rosettes connected by stems. Also remember that entries in the Artistic Division can be put together any time before the show, but entries in the Blooming, Nonblooming and Habitat Divisions must have been growing in the form entered for at least six months. An entry for the Artistic Arrangement, Bromeliad Collection or Decorative Container sections can be put together Thursday morning (if you are that confident). However, don't try to use *Tillandsia usneoides* (Spanish moss) to dress up any of your entries at the last moment unless they are intended to be in the Artistic Division. Multiple-species entries can only be put in the Habitat Division, Artistic Arrangement section or Bromeliad Collections section. To qualify for the Habitat Division, all plants in the entry must have been growing together for at least six months.

We have all suffered through an extremely harsh winter. Unless you had a heated greenhouse, your plants suffered cold damage. Please do not give up on entering plants in the show. If you have plants that still look good, but have small spots of cold damage on several leaves, consider entering them even if they do not meet your normal standards. Remember, the judges have also endured the cold winter, and suffered damage to their plants. We will ask them to be more lenient in assessing such damage than normal, and, given our shared travails, it is likely they will agree.

If you have plants that suffered major leaf damage, but have undamaged inflorescences, consider entering the Cut Inflorescence Section. A cut inflorescence, displayed in a non-obtrusive vase, is eligible for a major award in our show. You can run into trouble if the vase used for display is too decorative, so keep it plain.

If you have an interesting plant that you would like to show off, but for some reason (such as lack of symmetry, a leaning inflorescence or too much required leaf trimming) it would not be judged well, you should consider entering it under the Exhibit Only rules. As the name implies, these plants are not judged, but are available for others to appreciate.

Volunteers who are helping with the setup and entries (broadly defined to embrace the highly appreciated food service) on Thursday will be allowed to bring their entries into the Garden Room when they arrive for duty. If you are not working that day, please bring your entries between 12:30 and 8:00 PM and place them on the tables outside the Garden Room during processing. Remember to dump water from the plant entries before they are brought inside. Also, remember that any of your tags in an entered plant will be removed during the entry process. We will try to collect these tags in a single place so you can find them later, but it would be easier for everyone involved if you removed the tags yourself before handing the plants over. Finally, you could help speed the process of entries if you can be available when the entry cards for your plants are brought out. It is much easier for you to find your plants and to ensure that the correct entry card is placed in the correct plant than it is for one of our volunteers. Additionally, if you wish to have your plant placed on the table with a particular side facing out, you will need to stay around to inform (or help) the placement crew.

I would like to end these ramblings by thanking members who generously donated crystal they have won in previous shows back to our society: Karl & Kris Green, Anne Kauffman and Tom & Nancy Steinmetz. These donations will be used for awards in the 2010 Show, serving as encouragement for the next generation of bromeliad enthusiasts. BSSF is fortunate, indeed, to have members such as these.

PRESIDENT'S MESSAGE

by Robert Meyer

Because of events beyond my control, I will not be able to remain for this year's show. But, I wish to thank all prior to the first chair being moved, or reentry being received.

I say this ad nauseum, but it is true – this is the largest show in the continental U.S. and the number of entries surpasses the amount seen at the World Conference. This is largely because of the exhibit delivered by Nat DeLon who provides tables of hybrids which are not seen at the World Conference, or anywhere else for that matter. Their splendid lollypo-colored inflorescences amaze the amateur eyes of the visitors, and as novices (like myself) grow in awareness of the uniqueness of his Frankenstein-like inventions, we realize that the laboratories of biologically deviant species can often be as good and even greater than the works of Mother Nature. And, pay particular attention to his cross-species entries, you may not have

opportunities to see the same in the future – in short enjoy it while you can.

And, in honor of Nat DeLeon, an eponymous award of our bromeliad saint will be delivered to the person who meets his criteria. And, to the lucky winner, know one fact to be true: Nat will be the one to make the decision. Hence, the legitimacy of the award cannot be questioned.

Hope all goes well the day after the tax deadline has passed.

WHAT'S IN BLOOM - MARCH 2010

by Alan Herndon

Many species of *Aechmea* subgenus *Ortgiesia* (relatives of *Aechmea caudata* and *Aechmea gamosepala*) are still blooming. We are starting to have offsets of the plants that bloomed earlier in the season reach maturity and bloom themselves. (This of course, occurs most frequently when the plants are allowed to clump.) Species of this complex have short-lived blooms (two-three weeks), and it generally takes longer than a month for the offsets to reach blooming size, so the species reported each month will vary.

Androlepis skinneri seems to be blooming over a longer period this year than usual. Usually, the species flowers during the late fall and early winter seasons. Of course, flowering during the normal period this year was for naught since the freezing temperatures of January killed virtually all of the opened and unopened flowers, and most (if not all) of the developing fruit. Many inflorescences have emerged and flowered since the coldest temperatures, and I still have plants with buds.

We are starting to see the number of blooming *Neoregelia* species increase. Members of the *Neoregelia olens* complex are in the vanguard. Perhaps two more generations of offsets from these small, fast-growing plants will bloom themselves before the summer ends. Soon the *olens* complex species will be joined by members of the *Neo carolinae* and *johannis* complexes.

Aechmea (*alopecurus*, *amicorum*, *apocalyptica*, *araneosa*, *bocainensis*, *bromeliifolia*, *chantinii*, *comata*, *fosteriana*, *gamosepala*, *guaratubensis*, *gurkeniana*, *kerteziae*, *linharaesiorum*, Little Harv, *maculata*, *mexicana*, *milsteiniana*, *nudicaulis* (a few different clones), *orlandiana*, *pineliana*, *racinae*, *recurvata* *benrathii*, *seideliana*, *warasii*, *weilbachii* var. *albipetala*, *winkleri*)

Androlepis skinneri

Billbergia (*amoena*, *iridifolia* *concolor*, *laxiflora*, *lymanii* *angustifolia*, *nutans*, *pyramidalis* [variegated])

Canistropsis (*billbergioides*, *seidelii* (yellow bracts), *seidelii* (red bracts))

Canistrum (*fosterianum*)

Fosterella (*caulescens*, *micrantha*)

Guzmania (*lingulata*)

Hechtia marnier-lapostollei

Neoregelia (*Annick*, *bahiana*, *Bossa Nova*, *compacta*, *eltoniana*, *macwilliamsii*, Sheba, Ultima)

Nidularium (innocentii)
Orthophytum (duartei, fosterianum, harleyi, lymaniana, magalhaesii, maracasense)
Pitcairnia (pseudoundulata, recurvata)
Portea (alatisepala, petropolitana var. petropolitana)
Quesnelia (arvensis, humilis, lateralis, marmorata, quesneliana, strobilospica)
Ronnbergia brasiliensis
Tillandsia (bartramii, ionantha, fasciculata clavispica, festucoides, neglecta, polzii, tricolor acanthocrater)
Vriesea (botafogensis, colnagoi, ensiformis, erythroactylon, incurvata, Mariae, saundersii)

Letter to BSI about BIC

Received by many of BSI and reprinted here with some redaction because of space limitations

To: Officers & Directors, Bromeliad Society International
From: Greg Brown, Professor and Head, 0
Department of Botany, University of Wyoming
Adjunct Researcher Associate, Marie Selby
Botanical Gardens, Chair, Research Grant Committee,
Bromeliad Society International

Re: Research situation at Marie Selby Gardens

BACKGROUND.

In November 2009, I made plans to attend a professional conference in Orlando, Florida, 10 – 12 February 2010. In planning this Florida trip I knew that I would spend a couple of days at Selby Gardens in bromeliad study, and visiting Selby research colleagues (i.e., H. Luther, B. Holst, D. Benzing, J.R. Clark).

Summer 2009, I became aware that Selby Gardens was, like probably most botanical gardens, in financial distress, but knew nothing, really, of the details.

Approximately two weeks before travel to Florida, I received official notice that Harry Luther, Director of the Bromeliad Identification Center (BIC), had resigned from Selby Gardens to take a new position at a botanical garden in Singapore. This was followed by a flurry of emails among some of my non-Selby bromeliad colleagues in North and South America. Email tones ranged from surprised-sadness to lamentations of the certain, pending demise of the Gardens.

Just prior to my Selby arrival an article was published in the Sarasota Herald Tribune (bromeliads thrive and uncertainties grow at Selby Gardens 7 Feb 2010) that described the situation at Selby. I think it fair to characterize the article as somber and foreboding.

I was at Selby Gardens on February 11th and 12th, Harry's last two days at the Gardens, and I meeting briefly with him each day. I also had good meetings with Bruce Holst on the 11th, and a valuable, very informative meeting with Bruce, David Benzing, and John Clark, gesnariad expert and the newest member of Selby's Research staff.

I have been to Selby Gardens numerous times since 1987 to collect materials for my research, and work in the herbarium. October 2004, for a week of research, was my most recent visit. I anticipated that this return visit 5 years later was going to be filled with concerns over the long-term viability of the Selby research program if not for the entire operation.

OBSERVATIONS DURING FEBRUARY 11 AND 12.

As I looked and listened during this visit, I tried hard to keep an objective perspective, looking at the Selby situation from an institutional, and not a personal perspective. In part, this is known as Institutional thinking Hecllo, H. 2008. n Thinking Institutionally. Paradigm Publishers. Boulder, CO). I was keenly interested in how Selby appeared, especially the Research Department and research facilities, in 2010, as compared to 2004. What I found was positive. In all respects the physical-plant dedicated to research at Selby has improved substantially. Compared to 2004, the Research Department now occupies, arguably, a better building, one now located within the core of the Selby campus. The herbarium, fully compactorized, is now in a larger room that has better environmental controls (temperature, humidity, lighting) and is a much improved for specimen storage, and a more welcoming place to work.

The same is true for the spirit-collection room; much improved room and organization compared to its previous location.

The research building now holds a small but fully functional wet lab with capacity to do more rigorous research, research more typical of work coming out of a university lab (e.g., molecular data, quality microscopy). Personally, I could now easily do a full research sabbatical at SEL, because of the added research support available in this lab.

The Bromeliad Identification Center now occupies larger, more pleasant quarters than it did in 2004.

The afternoon that I arrived (11 Feb.) the senior staff had a critical meeting with the CEO to propose a new vision for the Research Department. This plan was approved, and it is a plan that I fully endorse. In part, the vision includes replacing Harry Luther, as Director of BIC, with a research scientist at the Ph.D. level.

Staff reductions within any institution are never pleasant. However, they have very recently become the norm rather than the exception – my own institution included. Good leadership guided by a carefully conceived, logical plan will lead an institution through these types of rough times in such a way that overall institutional strength ultimately becomes more robust. I believe that this is the current state-of-affairs at Selby Gardens, particularly in regards to the Research Department. They have a solid, pragmatic vision, and the leadership to act on this positively. I was not on the Selby grounds long enough to carefully evaluate the other major units (Outreach, Education and Horticulture), but if physical facility improvements (e.g., Selby House), and quality of new staff (e.g., in my opinion Angel is probably the best, most energized greenhouse manager I have encountered at Selby), then it appears that these departments have set a solid foundation for the future.

RECOMMENDATIONS.

The BSI should maintain support for the Bromeliad Identification Center (BIC) and bromeliad research at Selby Gardens. Hopefully the BSI, via representation on the search committee, could be involved in the search and hiring process for a new BIC Director, once the Selby financial situation permits. Granted, the BIC is likely going to be dormant during the upcoming period without a Director, but there are other things the BSI can do to facilitate research and curation of the invaluable living and preserved bromeliad collections. For instance, continue to support a bromeliad student research internship. The current, on-site research staff (Holst, Clark, Benzing) is more than qualified to direct these internships.

I will be happy to discuss this matter further with individual officers and board members, or as a group. Thank you.

cc: T. Buchter, Selby CEO; B. Holst; D. Benzing; J.R. Clark