# BROMELIAD SOCIETY OF SAN FRANCISCO

# February 2013

# NEWSLETTER

Our next meeting will be held on **Thursday, February 28** at 7:30 PM
Library, San Francisco County Fair Building, 9th Avenue at Lincoln Way, Golden Gate Park, San Francisco

**OUR MEETING THIS MONTH IS ON THE FOURTH THURSDAY AND WILL BE IN THE LIBRARY (SMALLER ROOM ON OTHER SIDE OF KITCHEN)**

## February Program

### Marie Selby Botanical Gardens

**Dan Arcos**, our club vice president, will present a slide show on his visit to the Marie Selby Botanical Gardens following the World Bromeliad Conference last year in Orlando. Selby offers the plant lover a unique view of the lush, tropical plant life along 10 acres of landscaped water front in downtown Sarasota, Florida. Walkways weave their way through the foliage right down to the bay and the Display Greenhouse simulates a tropical wet forest with flowering plants (including many bromeliads) growing among rivulets of water in a rock wall.

Selby Botanical Gardens also includes a Science Building and four research greenhouses, with two containing mostly bromeliads. It is the only botanical garden in the world to specialize in the preservation research, study and display of epiphytic plants. It is the International Center for Bromeliad Identification.

### February Refreshments

**Susan Charzon** and **Jill Myers** signed up for refreshments this month.

Here is **Dan Arcos,** our speaker for this month.

### Dues are Due

**A new year has begun and dues are due: $15 for a single membership and $20 for a family. Pay Harold at the meeting or mail to Harold. See back page for details.**

## January Meeting

Last month, **Carl Carter** gave us an amazing slide show of a portion of his trip last year to Peru. Whenever he gets off the bus he ventures quite a ways to explore plant material, so we were fortunate to see slides of bromeliads that many of the others on the trip probably did not see. He showed slides of many tillandsias that were not familiar to your editor – possibly these are monocarpic and we do not see them in cultivation. I was very impressed with *Tillandsia rogerlanea*; Carl also had fantastic shots of birds that were taken from outside a blind rather than within the blind where most people take their photos. Thanks Carl for your interesting slide show. Later this year we will get another interpretation of Peru from **Peter Wan** who was on the same trip.


*Tillandsia duratii* is one of those bromeliads that rarely if ever develop roots. This photo by Louis Davis is courtesy of the Florida Council of Bromeliad Societies

## In Memoriam
## Harry E. Luther

## 1952-2012

This article by Dr. Larry Giroux is reprinted from the November 2012 newsletter of the Florida Council of Bromeliad Societies. Harry was a major representative of the bromeliad world at the Marie Selby Botanical Gardens.

Harry E. Luther, at the age of 60, passed away last month from a cerebral hemorrhage at a hospital in the Republic of Singapore.

Florida has been gifted to have several individuals through the years such as Mulford B. Foster and Wally Berg, to name just a couple, who have contributed in large amounts, their time, expertise and generosity. Harry Luther, the former Director of the Mulford B. Foster Bromeliad Identification Center at Marie Selby Botanical Gardens (MSBG) and Assistant Director of Horticulture at the Gardens by the Bay, Singapore, is among that outstanding group of people.

After graduating from schools here in Florida, in 1978 Harry was hired by the first MSBG Director, Dr. Calaway H. Dodson, to develop the Mulford B. Foster Bromeliad Identification Center (BIC). In 1980, he was named Curator of Living Collections. After 32 years at the Gardens, his contributions and leadership to the Gardens' growth and prestige can be seen everywhere from the greenhouses, public viewing areas, the vast outdoor gardens, and even the pathways, overflowing with botanical treasures. Since those early years, my home society, the Caloosahatchee Bromeliad Society, has claimed him as one of their own.

Harry graduated from school with Victor Yingst, who became the chief horticulturist for the Agricultural Extension Office in Lee County. In 1980, Gene McKenzie and Victor along with a handful of bromeliad enthusiasts started the Caloosahatchee Bromeliad Society. It was Harry who contributed his expertise and knowledge during those early years to give credibility to the budding Fort Myers society by providing programs and consultations with Gene and Victor. I knew of Harry years before I became involved with bromeliads through Victor, who was my patient in my Family Practice Clinic. It was with Gene McKenzie that I first met Harry on a frequent trip Gene would to his office, just a few years later, when I became the Cryptanthus

Society (CS) Journal's Editor, my relationship with Harry who was the Chair of the CS Research Committee, became more involved. He taught me so much about bromeliads and about Cryptanthus from nomenclature to plant anatomy and even writing tips.

Since 1978, Harry E. Luther was an integral part of the Bromeliad Society International (BSI) organization, when he was appointed director of the Mulford B. Foster BIC at MSBG in Sarasota. In recognition of his work as an author, conservator, and taxonomist in the bromeliad world, he was elected an honorary trustee of the BSI by the Board of Directors in 1994. Later, these same qualities earned him the prestigious Wally Berg Award of Excellence from the BSI.

In his capacity at the MSBG, he was responsible for managing the growth and propagation of an enormous diversity of species, including both epiphytic and terrestrial bromeliads. And fortunately for Cryptanthus enthusiasts, Harry was particularly diligent with the outstanding Cryptanthus collection. Even a casual observer is impressed by the quality, proliferation and quantity of these immense collections, which were under his direction.

Besides being the premier identification "expert" at the BIC, he was recognized as one of the most knowledgeable experts on the systematics of the bromeliad family. Using both live and dried specimens, either sent to him or from Selby's library, he described more than 100 bromeliad species new to science. He traveled on field trips to Brazil, Costa Rica, Ecuador, Honduras, Mexico and Panama in search of new species for the recollection of described species and clarification and confirmation of information of species in cultivation.

Besides the more than 200 published articles to be found in established hobbyist and scientific journals, Harry has also been recognized as a major contributor to many books and as a scientific and editorial adviser to several journals; in particular, the Journals of the BSI and the Cryptanthus Society. Included among this impressive list is his newest book co-authored by David H. Benzing, Native Bromeliads of Florida (Pineapple Press, Sarasota, 2009).

Whether it has been in consultation with an individual hobbyist or by a presentation to a bromeliad society, Harry graciously gave of his time and effort to educate and entertain any individual or group who approached him.

Besides his trusteeships in the BSI and the CS, he was an active member of the Sarasota Bromeliad Society and the Florida Council of Bromeliad Societies. Internationally, he was made an honorary member of the Brazilian Bromeliad Society and the Japanese Bromeliad Society.

Two and a half years ago, with the help of his longtime friends, Dennis and Linda Cathcart, to assure health and retirement benefits, which were no longer guaranteed at MSBG, he was offered and accepted the position of Assistant Director of Horticulture at the Gardens by the Bay, National Parks Board in Singapore. It was here that he spent his last years doing what he loved and was so good at: helping plant hobbyists and professionals discover the tropical world and all of its treasures.

In spite of the loss of his proximity to us here in Florida, Harry continued to share his knowledge and expertise by letters and e-mail. So many of us are deeply indebted to Harry Luther for his contributions these past 34 years. I'm positive that we in the bromeliad world will be seeking Harry's expertise as it is recorded in his publications, garden records, and the notes taken of his presentations for a long time to come. I only wish it could be in person. Thank you for everything you have done for us dearest teacher and friend.

## Bits and Pieces
## Did You Know?

This article is reprinted from the February 1988 newsletter of the South Bay Bromeliad Associates.

**D**id you know that adding certain kinds of wood sawdust or shavings to your potting mix acts as an inhibitor to the growth of some fungi? Redwood will work. Also, for years I have been using the local cedar and juniper shavings in my mix and can vouch for their efficacy. And the plant roots clutch on as tightly as on oak chips, but oak deteriorates quickly. I once tried cottonseed hull – yuck! A gray mold jumped up overnight. Didn't seem to do any harm, but it didn't look good either.

Did you know that inflorescence growth on certain bromeliads is among the most rapid in the plant world? Measured and timed growth of the flower spike on *Aechmea marmorata* [this plant

has been reclassified as *Quesnelia marmorata* – Ed.] has revealed an extent of 14 inches in 4-5 days. This is not a record, but the length of time the inflorescence is attractive greatly surpasses "ordinary plants." Many billbergias such as *Billbergia* zebrina, *B. porteana*, and *B. meyeri* also feature fast flower sprouts, but frequently fade in a flash.

Did you know that certain species of frogs which live at ground level in Costa Rica carry their tadpoles up tall trees to deposit the youngsters in bromeliads? A real living nursery school.


Photo of *Quesnelia marmorata* is by Michael Andreas and is courtesy of the Florida Council of Bromeliad Societies.

## The Roots of Bromeliads

This article by David Longley is reprinted from the March 1980 newsletter of the Bromeliad Study Group of Northern California.

In reference to rooting in bromeliads, I have seen many examples, primarily in the subfamily Tillandsioideae, produce roots after having been taken from their natural habitat. In doing so the original anchoring system is damaged or destroyed and can no longer function as it once did.

These plants then arrive at nurseries and our backyards or greenhouses (if we are fortunate enough to have one). At this point they are completely dependent on our care. We have been conditioned into thinking that the root system of epiphytic bromeliads serve only as an anchor system. However, in view of recent studies this concept is changing. The following personal observations back this theory.

But first, let us look at a bromeliad starting from seed. There are a host of other organisms living on the same branches as do the bromeliads – living, dying, and decomposing, depositing leaves of usable nutrients on the bark. Let's imagine that it is raining in the jungle on a warm afternoon. You can see rivulets of water running down the tree branches and dripping from underneath the branches. A tiny seed has been caught under a branch. Here it will remain damper than on the upper side of the branch. It sprouts in a few days because of the humidity, sending out roots that fasten themselves to the branch, by secreting a substance like glue. The plant now begins to mature and needing light it begins to reach out from under the branch for more light and begin to develop mature leaves. This process is true of all epiphytic bromeliads except thos that are terrestrial or that lodge on the tree trunk itself. Now imagine that there has been a period without rain; the roots have dried somewhat and become woody, but the growing tip is still green and fleshy. Again, it rains and the roots swell by absorbing the water that falls on them and the water that runs along the surface of the branches carrying with it dissolved nutrients that the plant's roots can absorb and send to the leaf surface to be changed into chlorophyll. I have actually seen roots swell after dampening them with water. This leads me to believe that this anchoring system serves to supply the plant with water and nutrients. Those that are potted do much better in a damp well-drained soil. When you are repotting take time to notice the mass of living roots that a moist soil will produce.

Now let's go back to those new arrivals. In many cases we find the root system totally absent when being cut from the tree. To promote a new anchor system let us keep in mind its early beginning under that tree branch. Dark, damp, and humid. To illustrate this I have *Tillandsia caput-medusae* that came to me with no roots whatsoever. I carefully wedged it into the crotch of a V-shaped piece of driftwood, its base turned away from the light. For five months I foliar sprayed it with food and vitamin B-1. One day I was rewarded with several new roots. This method works for me. However, here are a few other notes to follow. Heat and humidity are the most important factors in achieving new root growth. Nurserymen who have supplied bottom heat (electric heating coils running along the tops of the growing benches) will all attest that this helps in producing root growth in propagating offsets.

Now that our new plants have a few roots, one might observe that each year it will produce more to reinforce its stability as it gets larger. The roots are also capable of branching, so even from old cut ends it is possible to have new root growth[1]. For faster and healthier roots, a fertilizer that contains phosphorus is most beneficial during the fall and winter months. Here in Northern California it is quite cool and the plants have all but stopped growing. But in a greenhouse where the temperature is warmer this growth can be maintained year-round. But I recommend a growth rest so they can store energy for blooming.

Two more observations I have made concerns mounting materials and removal of offsets. We have all used cork bark as a mounting surface. Well, it's wonderful, but it does not absorb moisture and for that reason it is impervious to rot. Therefore, we need to apply water more often to promote roots, unless one can supply the plant with high humidity. More suitable is the tree fern Osmunda, a more absorbent material that the roots can actually grow into.

Secondly, the rooting of offsets. We have heard that the offset can be removed when it is one-third the size of the parent. But did you also know that the growing axis of the plant will remain dormant until the plant has a sufficient root system to support it? This can take up from six months to a year. This also slows down the development of the inflorescence. To avoid an interruption in growth, I recommend waiting until visible signs of roots appear or to wrap the stolon with sterile sphagnum moss and treat it in the same way as air layering, by cutting a wedge in the stolon, and dusting it with root-tone. Then wrap it with the sterile sphagnum moss and dampen the moss with a solution of B-1 and wrapping it all plastic to keep it moist. This method works very well and saves time in maturation of repotted offsets. With offsets of Vrieseas and Guzmanias it is more difficult to get them started and I, for one, am still trying by dusting with root-tone to dry off the base. They should be left on their sides to dry off for a few days before potting. I also recommend that all transplanting and separating be done in the spring to avoid rotting of the base or center-rot due to what I believe to be cold temperatures when repotting. Even in a heated greenhouse this is a tricky business. As we sometimes tend to pot our plants too high above the base for extra support. But skewers along the sides can give that support if needed.

Now there are some plants that after maturation will not produce roots on their offsets, except under perfect conditions. These are a few of them: *T. usneoides*, *T. purpurea*, *T. duratii*, and *T. palacea*. So do not be disappointed with these. I'm sure we have all made observations in rooting and each of us has gotten results by various means, so why not share them with us.

[1] In the winter months, mounted bromeliads will send out roots in any direction, owing to the lack of strong sunlight.

**BROMELIAD SOCIETY OF SAN FRANCISCO (BSSF)**
The BSSF is a non-profit educational organization promoting the study and cultivation of bromeliads. The BSSF meets monthly on the 3rd Thursday at 7:30 PM in the Recreation room of the San Francisco County Fair Building, 9th Avenue at Lincoln Way, Golden Gate Park, San Francisco. Meetings feature educational lectures and displays of plants. Go to the affiliate section of the BSI webpage for information about our meetings.

The BSSF publishes a monthly newsletter that comes with the membership. Annual dues are single ($15), dual ($20). To join the BSSF, mail your name(s), address, telephone number, e-mail address, and check made payable to the BSSF to:
Harold Charns, BSSF Treasurer, 255 States Street, San Francisco, CA 94114-1405.

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## BROMELIAD SOCIETY INTERNATIONAL

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BROMELIAD SOCIETY
OF
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**This month Dan Arcos takes us to Selby Botanical Gardens!**