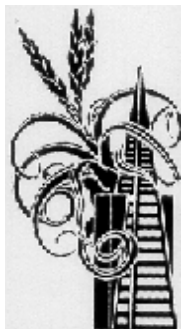


BROMELIAD SOCIETY OF SAN FRANCISCO



April 2005

NEWSLETTER

Our next meeting will be held on **Thursday, April 21, 2005** at 7:30 PM
Recreation Room, San Francisco County Fair Building, 9th Avenue at Lincoln Way, Golden Gate Park,
San Francisco

April Program

World Bromeliad Conference 2004

This month we are fortunate to have **Elizabeth Patterson** from Dallas, Texas. Betty is an expert on bromeliads and she has traveled to study the bromeliads of Ecuador every year since 1985. When she isn't collecting in Ecuador, she is playing the string bass for the Dallas Symphony Orchestra.

Betty's first visit to our society was in 1999 when she showed us many flowering puyas in Ecuador. Her presentation this time is on the Paramos of Ecuador. Don't miss this opportunity for an unusual and exciting show.

Betty will have several of Jose Manzanares' books on the bromeliads of Ecuador (both volumes I & II) with her for sale. The cost is \$120 each.

Betty also will be providing us with a plant table with some unusual bromeliads.

April Refreshments

Carl Carter and **Bruce McCoy** will provide refreshments this month.



Betty Patterson, taken at WBC 1998. Photo is courtesy of **Marilyn Moyer**.

Under the Mango Tree

This article is by John Catlan and is reprinted from the August 1995 The Commentary, newsletter of the Bromeliad Society of Broward County, Inc. It originally appeared in the Australian May/June 1995 BROMLINK of the Gold Coast Succulent and Bromeliad Society. Although the article is written about Billbergias in the southern hemisphere, this seems to be Billbergia month here in northern California.

It's Billbergia month. Over the last few months the day length has been decreasing. This triggers Billbergia flowering. Billbergias were named after a Swedish botanist, Johannes Billberg in 1821. In 1992, Luther and Sieff listed 61 species and 27 varieties within these 61 species. To simplify this article we will divide the plants according to flowers into two groups, watch spring (helonicoides) and others. Watch spring: this name originates from the fact that individual flower petals (up to 50 mm (2 inches in length) curl back upon themselves as they open and look like a watch spring. When the flower is spent they will uncurl. The bracts are spectacular, pendulous, and larger than the other group. The plants are very tubular often with silver bands on the backs of the leaves and they take longer to mature; they respond to very small doses of fertilizer each year.

Billbergia flowers do not last. True, but we can extend the life of the bract. Heat and low humidity hasten the end of the spectacular event. Move the plant to an area that is darker. This should decrease the temperature and therefore increase the relative humidity. Strong dry breezes hasten the deterioration of the bracts. Under improved conditions you can get up to four weeks with some bracts. Remember – drop that temperature as the bract emerges from the tube.



Billbergia zebrina is one of the watch spring billbergias. This photo is by Reginaldo Baiao and is courtesy of the Florida Council of Bromeliad Societies.

The other group contains Billbergias valued for their bracts and/or foliage; any excess fertilizer of the foliage plants or too little light reduces these plants to green look-a-likes. There are quite a lot of people who advocate no fertilizer at all for these plants but I find this leads to premature deterioration of the foliage. For potting, I prefer a very open mix, a standard pot, and to grow the plant as clumps. To conserve potting mix, add a couple of large rocks and a bit of chopped styro boxes in the bottom of the pot. As our mix is very light, the rocks do not make the pots too heavy, but does add stability.

Questions and Answers!

This article is reprinted from the March 2000 Caloosahatchee Meristem, newsletter of the Caloosahatchee Bromeliad Society. It is a summary of a Question and Answer session at their February meeting.

What are 'Sports' in reference to Bromeliads?

As mentioned earlier (see last month's newsletter – Ed.), technically each plant in a GREX is physically different. Since each of these plants are unique, the only way to produce an identical plant is to pup the desired bromeliad. Occasionally, a pup will develop which is significantly different from the mother plant. This mutation of the mother plant is considered a 'Sport'. In many

cases, pupping this plant may result in plants which resemble the original mother plant. This is called 'reverting back'. Many new cultivars have been produced from new Sports since most such plants pup true. This new cultivar can then be given a unique name and registered. When you purchase a Bromeliad with this specific name, you know that you'll get a plant nearly identical to the original.

Do variegated plants require any special care?

Experience has indicated that variegated plants often do poorer given identical conditions to their normal counterparts. Hattie Lou Smith noted that she has much better success with her *Aechmea orlandiana* 'Ensign' if she gives it frequent light fertilizing rather than periodic heavy treatments. Producing plants from variegated mothers is often more difficult than from normal pigmented parents. As mentioned above, 'reverting back' to a solid green plant is much more common with variegated Bromeliads. Albino pups are frequently produced from variegated mothers. Due to the lack of green pigmentation or chlorophyll, the pup will not survive separated from its mother. Although there is nothing to keep you from blooming the plant attached to the mother, without significant pigmentation, the albino plant is exceptionally sensitive to sun and other environment damage.

How do you treat scale?

There are two kinds of scales usually found on Bromeliads. The first are small black specks. These have hard cases which are more difficult to treat topically. Systemic treatments are preferred for this kind. Once they are killed they can be readily scraped off. The second type are softer, slightly powdery and tan or grey-colored. This kind can be checked for viability; if it smears when brushed, it is still alive; if it chips off it is dead. This kind responds much more easily to topical treatment as well as systemic treatment. Cygon 2E (unfortunately this pesticide is no longer available in California – Ed.) has proven a very effective systemic treatment for all kinds of scale as well as other infestations. As with any treatment for scale, prevention is preferred; otherwise, the dead scale still needs to be manually cleaned from the plants. Topical treatments are

becoming more popular since they are more environmentally safe and less likely to result in personal contamination. Topical treatments which were mentioned include spot treatment with alcohol, mixture of alcohol and 409, Neem Oil in water with a small amount of liquid dish soap and Safer soap.

What causes the base leaves of the soft leaf bromeliads of the genera Guzmania and Vriesea to turn brown and dry up?

There may be many reasons for this to occur. Some of the explanations can be hard water, salty water, excessive drying or excessive water trapped between the basilar leaves. These groups of plants in nature grow in areas which are very airy and are probably not used to long periods of moist conditions.

What chemicals are deleterious to Bromeliads?

Copper in any form such as telephone wire, certain fungicides and paints can cause serious damage to Bromeliads. Some believe that once the copper becomes systemic it may be carried on to future generations. Some bromeliads may be more resistant to copper or may eradicate it so it does not get passed on to the pups. Zinc may have a similar effect on Bromeliads. The chemicals used in pressure-treated wood may be leached out by rain or watering and drop on Bromeliads resulting in leaf damage. Most oils clog the organs on the surface of the leaves so the leaves cannot absorb water and nutrients. Fertilizers, either concentrated liquid fertilizers or granular fertilizers should never be left in the center cup of bromeliads or on the leaves, since they will burn the plant.

What is quilling?

The process by which new leaves are formed in the center of a bromeliad is a fascinating event. There is a mucoid or gelatin substance between the layers of leaves. When some kind of environmental factor arises such as a period of dryness or exposure to a chemical, the separation of the leaves is retarded. Manually separating the leaves or applying water or liquid dish soap between leaves may aid in the separation, preventing further deformities of the emerging leaves.

Welcome New Member

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Strybing Annual Spring Plant Sale

We will be selling bromeliads at the 38th Strybing Arboretum Spring Plant Sale on Friday evening, April 29th from 5-8 PM and Saturday, April 30th from 10AM-2PM. If you are able to donate plants (bromeliads for the landscape are always in demand) or work at the sale, please sign up at this month's meeting or notify Marilyn Moyer (phone 650-365-5560 or e-mail MarilynMoyer@comcast.net). We will have a sign up sheet for volunteers at this month's meeting. This sale exposes others in the plant world to bromeliads and exposes us to other plant families. It should be a fun event for a worthy cause and you can add to your collection at a very reasonable cost. This sale also provides us the opportunity to promote our June sale.

June Plant Sale

Our combined plant sale with the San Francisco Succulent and Cactus Society will be on June 11th and 12th this year at the County Fair Building. It is our only annual event that brings in money to support the society. So save this weekend in your busy calendar.

Tillandsias of Mexico's Highway 15 (Toluca to Morelia)

This article by Sue Gardner is taken from The Bromeliad Hobbyist, Vol 2 No. 8. It originally appeared in the September 1975 Corpus Christi Star to Star.

This stretch of highway takes you through 156 miles of one of the most beautiful sections of Mexico. The altitude ranges from a little over 5000 feet to well over 9000 feet and winds through pine forests capped with fern, down through fern-filled valleys, along winding streams and through intermediate ranges with drier oak forests.

We will begin our tour as we leave Toluca. It is chilly at 7:00 AM and sweaters are in order, even in July, as we curve around a large Christopher Columbus monument in the circle and swing past the University of Toluca and on out into the countryside. The first 25 or 30 miles are relatively easy driving as we pass through one little community after another. Then the road begins to wind up through tall pines and we begin to notice small grey Tillandsias high up on the tall straight trunks. The road continues through these beautiful wooded areas; the morning sun dappling through the towering trees reflects on the tiny grey bromeliads and the ferns on the ground beneath. We continue to proceed into and out of these wooded areas, some having rather dense populations of this small Tillandsia and others very sparse. On into the Bosencheve National Park and the Tillandsias are still with us as we park the car for a picnic breakfast and some photography. While looking for suitable plants to photograph we saw a stranger among the tiny Tillandsias – a single blooming plant of *Tillandsia prodigiosa*. This plant was somewhat smaller than those we had seen near Morelia on a previous trip. A view through the telescopic lens verified that this small Tillandsia which we had been seeing was indeed *T. macdougallii*. No flowering plants were found but several with old dried inflorescences still hanging on were seen.

Back on the highway we wind down through a lovely wooded area and along a stream as we leave the State of Michoacan, then out of the National Park and continue to wind down. For the next 20 miles we continue up, down, and around through villages and then the city of Zitacauro. About the time we pass through the village of San Felipe, we begin to notice bromeliads in the trees again. As we find a wide spot to pull off the road, we

discover that these are *T. bourgaei* and *T. intumescens* v. *brevilamina* (described in Phytologia Vol 28 May 1974 No 1 from a plant we collected in 1971). Fortunately, there were flowering plants of both species in the trees as the plants look so similar when not in flower as to be indistinguishable. Since we limit our collecting to a handful of young plants, we could only hope that we picked samples of both species. Beneath the trees and along the edges of a gully we found many ferns, selaginella, terrestrial orchids, and a couple species of begonias. As we pack our camera equipment back into the car and prepare to leave, we bid adios to the two youngsters who paused with their Helados cart to observe the crazy Norte Americanos.

Back on the highway we cross the Rio Tuxpan and down through a straight stretch with cattle ranches and fields of gladiola and through the small city of Tuxpan. The last time we came through here was early June and city streets were full of carts and baskets of gladiola bulbs and bundles of cut gladiola blooms. Now in early July the new crop is just beginning in the fields. On through a cut with the bridge crossing the Rio Turundio visible ahead, we notice large blooming Tillandsia are growing all over the rocks on both sides of the highway. We spot an area to the right just wide enough to get the car off the highway and hurry out to investigate. Our cactus loving youngsters soon discover that the roadside is lush with large echeverias growing among large ferns exposed to the full sun. As I am trying to decide what this medium-large grey Tillandsia is and set up my camera, I notice several other varieties growing there also. These included a Tillandsia similar to *T. juncea* and *T. recurvata*, *T. capitata* (a small yellow-green variety) and the dominant large, and as of yet still unidentified plant.

Some of the smaller plants also inhabited the scrubby trees on top of the rocky ledge. Another native plant which we found growing here were wild dahlias of the brightest scarlet, bobbing their heads in the rather brisk wind, doing their best to defy the swift shutter of my trusty Yashica.

As we proceed across the narrow bridge and pass through villages and ranchos we begin to climb

back into the pine forests. We notice more of the Tillandsias similar to *T. juncea* on the pines. Many of the pines also have long cuts on their tall trunks with small cups attached to the bottom to collect the sap for processing into turpentine and resin. Then the trees become thickly populated with Tillandsias which on closer inspection are recognized as *T. prodigiosa* and *T. bourgaei* along with the Tillandsia which we described as being similar to *T. juncea* and which we now believe to be *T. chaetophylla*. There were also several small orchids and many ferns growing here. From here on we began to climb and soon we were literally in the clouds. The air was quite chilly and misty and the lack of sunlight curtailed further photography. Then a brief stop at the famed Mirado de Mil Cumbres (View of the thousand peaks). As we reach the summit of 9,300 feet and begin to wind down, the same combination of Tillandsias are still with us. Very few have inflorescences with any color left and this *T. prodigiosa* is about twice as large as the single plant we photographed earlier near Toluca and has an inflorescence nearly three feet long. At the summit we are in Atzimba National Park. Then a few miles later we find ourselves in Moreles National Park. We are still seeing these lovely Tillandsias which have been greeting us for forty or more miles.

It is easy to understand why this lovely prodigious plant soon perishes when taken from its home in these enchanted forests and expected to adapt to the hot bright weather of sea level South Texas.



Tillandsia prodigiosa is a bromeliad that grows well in San Francisco, but it is a difficult plant to obtain because it does not pup.

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, 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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