

BROMELIAD SOCIETY OF

SAN FRANCISCO

MARCH 2016



Meeting Specifics

When: Thursday, March 17

Time: 07:30 PM

Recreation Room

Where: San Francisco County Fair

Building

9th Avenue at Lincoln Way

San Francisco



Puyas in Cultivation

This month, **Brian Kemble** will be visiting us again and will talk about growing puyas in cultivation. He last visited us in 2009.

Puya is a large genus of mostly South American bromeliads, with 168 species listed in the Pitcairnioideae volume of the Smith & Downs work on the Bromeliaceae. The distribution of the genus largely follows the Andes mountain chain, from Chile and Argentina in the south up to Colombia in the north, with outliers to the east in Venezuela and to the north in Costa Rica. Included is the largest member of the entire Bromeliad Family, the amazing *Puya raimondii* from high in the Andes. This plant can be found up to 13,000 feet altitude, and its inflorescence reaches heights of 30 feet. At the short end are dwarf species in the range of one foot tall. Puyas boast an amazing array of flower colors, [from purple to chartreuse to metallic blue-green](#).

[Although Brian has not been to South America to see Puyas in the wild](#), he has been growing and photographing these and other terrestrial bromeliads for over 30 years. Brian lives in San Francisco, and is Vice President of the San Francisco Succulent and Cactus Society. He is the Curator at the Ruth Bancroft Garden in Walnut Creek, where he has worked for the last 36 years, and he is also the Vice-President of the Institute for Aloe Studies, based in Oakland. Brian loves to see and photograph succulents in habitat, and has made many trips to Mexico, South Africa, Namibia and Madagascar.

No one signed up for refreshments this month.



February Meeting

Last month, Kelly Griffin took us on a trip Columbia

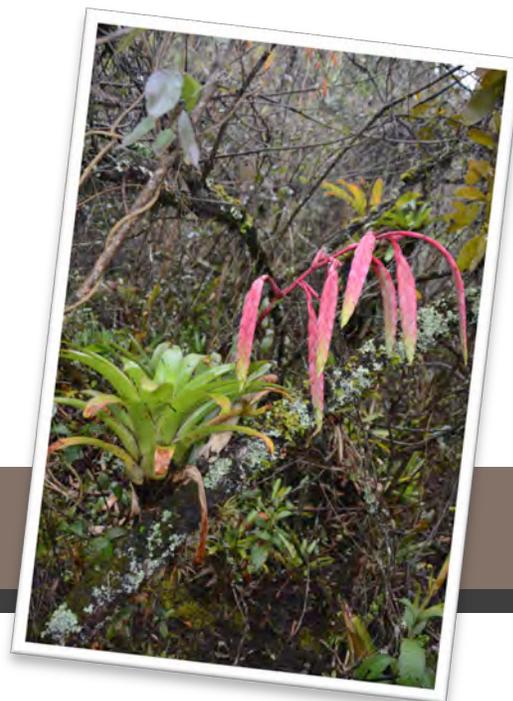
Kelly Griffin's slide show covered his exploration many different plant genera on a recent trip that he made to Columbia. Because of the many criminal activities in Columbia for several years, this is a country that we do not get to visit very often. The country has recently opened up to more tourism and there are probably many new bromeliads to be found.

Kelly's travels were mostly in the rain - the one constant he

discovered on this trip.

As Kelly ran through his slides, whenever he came to a bromeliad, he asked our members to identify it. We were as clueless as Kelly on most of the plants.

Kelly had planned to bring bromeliads and other plants for sale, but they were all sold at the Tuesday meeting of the Cactus and Succulent Society. Fortunately, Brian Kemble brought some interesting terrestrial bromeliads and companion plants for us.



Here is one of the photos of a tillandsia that our members could not help identify for Kelly

Dues are Due

A new year has begun and dues for our society are due: \$15 for a single membership and \$20 for a dual membership. Pay our treasurer, Harold Charns at the meeting or mail to Harold. See back page of newsletter for details.

Pacific Orchid Exposition

Thanks to all who helped at our booth. The sale was a success. We sold all the *Tillandsia cyanea*, and other tillandsias we purchased. Some of the potted plants are left. We did well in spite of another bromeliad vendor booth that provided competition for us. Thanks again!

A Carnivorous Man

By Derek Butcher

There is always something not planned at our meeting which is why you should always come along unless you are the sort that just waits for the Gazette, but then any news is old news. At this meeting we had a visit from a Carnivorous man - well that was how he was introduced.

He was no different to all other plant lovers, only this time it was carnivorous plants - and because he had a bromeliad he felt he should see the experts regarding growing techniques. There are very few Bromeliads that have evolved to have a taste for flesh. One is *Brocchinia reducta* and he brought one in to show us.

It has leaves formed into a tube like a Billbergia, only the top of the tube has a waxy coating making it slippery and allows insects to fall in to the water at the bottom of the tube. He quickly found out that this particular plant is not widely grown by the Bromeliad fraternity in Adelaide. In fact his best place to see one would be with Bill from Bute. Bill grows it and never flowers it and gets replacement stock from Melbourne. So we were not that helpful in giving advice as how to grow the plant.

Carnivorous plants have evolved to be able to survive in an environment where they get very little nutrient from the strata to which they may be attached. Plants generally get their nutrient from decayed matter whether flora or fauna and generally take this up via their roots...Plants will do anything to get a feed! Carnivorous plants may be considered even cleverer because they might realize that there is more nutrient in dead fauna than dead flora.



Imagine plants growing there had the ground beneath their feet going upwards with the inevitable change in climate. It was a case of die or evolve. Many Bromeliads grow up there today but try to grow them in your backyard. You see they have evolved to such an extent relying on specific natural conditions that they cannot survive unless those conditions are replicated.

There are a few exceptions and *Brocchinia reducta* is one. Not only is it used to harsh wet conditions but survives by being able to digest beetles and things. It doesn't actually trap them like the Venus Fly Trap but grabs any spare meal that might pass by.

So we were not much help in giving life-saving advice to our Carnivorous man whose best course of action would be to do the same as he does with his other carnivorous plants which have evolved in the wild due to similar restrictions in habitat. What was a very nice touch was that he brought in a box of Camellia flowers for us to share. May he come again!

[Insects that enter the waxy top of the long, narrow tube tend to slip all the way down. Once they have hit the water they will find it difficult to climb up and out. They will die and decay in the water and will provide nutrients to the plant. Ed.]

[This article is reprinted from the January 2014 BROMELIANA, newsletter of the New York Bromeliad Society. It was originally printed in the July 2013 issue of BROMGAZETTE, newsletter of the Bromeliad Society of South Australia.]

Vriesea

Vrieseas were instituted in 1843 by J. Lindley and named for a Dutch professor of Botany, H. deVries. An accurate number of identified species would be almost impossible to estimate due to the fact that new plants are still being found as collecting trips are made and the constant re-evaluation and changes in taxonomy.

The largest number of vrieseas are found in Brazil, but they are also found in all of Central and South America, growing as both epiphytes and terrestrials. The majority grow in rainforests but there are some that grow under rather adverse conditions. A friend told me of finding one large species in Mexico that was growing up on the side of a mountain, in almost total rock strata. They grow in altitudes from sea level to ten thousand feet.

Vrieseas are classified in the Tillandsioideae branch of the bromeliad family. They are so closely related to the Tillandsias (and very similar in appearance in many instances) that the only means of accurate identification is found by examining the flower. Most of obsolete genus Thecophyllum was absorbed into the vriesea genus. These were plants that mostly flowered at night and produced white flowers.

What makes the plant a Vriesea?

1. The leaves are entire - in other words, the edges are smooth and never have spines. Trichomes may cover as little as two percent of the foliage. The plants are usually rosettes, funnel shape and are green or grey scaled.
2. Petals are separate and contain scales. The main difference between Vriesea and Tillandsia is based on the existence of the small petal scales. If they are present, the plant is a vriesea. If not, it is a tillandsia. These scales consist of a pair of flexible pieces of tissue attached to the inner surface of each corolla.
3. Ovaries are superior.
4. Fruit is a capsule containing plumose seeds.
5. Seeds are equipped with a pappus (crown hair), which is laid straight in the capsule and never folded. This hair functions in the dispersal of the seed.

The flowers are typical monocotyledon flowers in that all the flower whorls are of three parts. Exceptions will only appear in an abnormal flower. The normal flower will contain three sepals, three petals. The stamens will be arranged in two groups of three and the ovary will be formed of three fused carpels.

The inflorescence is composed of one or a branched spike, usually spear shaped. The bracts can be red, yellow, dark purplish red, or green. The flowers are yellow, green, or white. The spikes can be erect or pendant - sometimes semi-pendant.

The plants range in size from a few inches, such as *Vriesea racinae*, to six feet or more in height - *Vriesea imperialis*, for example. [This plant is now *Alcantarea imperialis* - Ed.] The leaves may be soft or stiff. The leaves will color up beautifully on a number of the vrieseas if they are grown in bright light. When they are grown in more shade, the leaves are inclined to remain green on some of the same plants that will surprise one with shades of purple, maroon, or coppery maroon when moved to sufficient light. The foliage may also vary in shades of green and can be barred, spotted or splotched in very interesting patterns. Some are as unusual as the black-bottomed *V. phillipo-coburgii*, or as the purple, green and white *V. platynema*. And *V. guttata* can't be left out with its soft green foliage dotted with

Maroon ‘measles’.

A few of the larger vrieseas are found growing in full sun in their natural habitats, but the majority are found in filtered light conditions. The majority of the vrieseas grow well outside in the southern California area with only slight protection overhead, such as shade cloth. They make beautiful patio plants or can even be houseplants.

Although many of the vrieseas grow as epiphytes in their native habitats, experience has shown they grow much better as terrestrials for me. They prefer a moist, slow drying mix that is slightly on the acid side. Water deficiency reduces the ability of the plant to photosynthesize and a forty to fifty percent deficiency (even less, it seems) is often fatal. Some dehydrated plants will regain their health after watering or soaking, but the thin-leaved types rarely recover. Because of this, it is best to allow the plants to almost completely dry out. Dr. Rauh states that the roots are used for the absorption of water.

They love humidity and need good air movement. If they are crowded together in a greenhouse (or any other area) with poor air circulation, you will find they are inclined to brown off at the base and leaves will have a tendency to develop brown tips.

Dry-growing also encourages root mealy bug and this is especially dangerous to vrieseas. The mealybugs will multiply very quickly on plants that are very dry.

Some vrieseas will produce only one offset. *Vriesea splendens* (some clones) is an example of this. There is a way to force further offsets, which will be discussed in another issue.

If you plan to grow vrieseas from seed, I hope you have lots of patience! They are in no hurry to grow up and be an adult. The quickest I have ever been able to make it from seed to maturity is three and a half years! It has taken me a minimum of four to six years for most of them.

[This article by Kathy Dorr is reprinted from the September 1986 BROMELIAD HOBBYIST. Although there have been many more vrieseas discovered and described since then, the genus description and cultivation are accurate.]

DID YOU KNOW

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

Reprinted from the Houston Newsletter, January 1988



Vriesea racinae



Vriesea guttata



Vriesea hieroglyphica

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 sfbromeliad.org 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 payable to the BSSF to: Harold Charns, BSSF Treasurer, 255 States Street, San Francisco, CA 94114-1405.

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BROMELIAD SOCIETY INTERNATIONAL

The Bromeliad Society International publishes the Journal bimonthly at Orlando, Florida. Subscription price (in U.S. \$) is included in the 12-month membership dues. Please address all membership and subscription correspondence to Membership Secretary Annette Dominquez, 8117 Shenandoah Dr., Austin, TX 78753-5734, U.S.A. or go to www.bsi.org.

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