

BROMELIAD SOCIETY OF SAN FRANCISCO

JANUARY 2014



Meeting Specifics

When: January 16

Time: 7:30 PM

Where
Recreation Room
San Francisco County Fair
Building
9th Avenue at Lincoln Way
San Francisco

Some of the December gift plants will be available at our raffle this month.



2012 World BSI Conference

Every two years the Bromeliad Society International (BSI) sponsors a conference and uses various societies at the conference location to help organize and host it. In 2012 Orlando, Florida hosted the conference and had the help of many other Florida societies to pull it together. Activities at these conferences include tours of member's gardens, general tours in the area, huge plant sales, plant show, and seminars (both technical and general interest).

Our society was well represented at this conference and **Peter Wan** will be providing a slide show on the activities. Peter is a long time BSSF member and has been to most countries through the Americas as well as numerous other place in Africa, Asia and Europe. An accomplished photographer and artist Peter's affable personality always makes for an entertaining program.

Roger Lane has signed up for refreshments this month.



December Meeting

A great time was had by all at our Holiday Party

Our holiday potluck dinner and party was a great success. Thanks for bringing in great food items and wonderful gifts to share. Thanks to all of you who arrived early to help set up the tables and chairs so quickly. Thanks to Michael Kiehl who provided gift plants that everyone wanted. We wish to especially thank **Dan Arcos** and **Marilyn Moyer** for the planning and ensuring the party went off without a hitch.

At the party, some people asked for the recipe for scalloped potatoes. It comes from the January 2000 issue of Fine Cooking and is called "Classic Potato Gratin rather than scalloped potatoes. Here goes -

"Every culinary repertoire should have a dish that is dead simple and yet has the cachet of being something special. My dish is a classic French potato gratin. The potatoes are low

fat, but the cream's not, and no, there's no substitute.

2 lb. Yukon Gold potatoes
 3 cups heavy cream
 1 tsp. coarse salt
 1/8 tsp. freshly ground pepper
 Pinch freshly grated nutmeg
 2 cloves garlic, peeled and smashed
 3/4 cup shredded Gruyere
 Heat oven to 400 F. Using very sharp knife or mandolin, cut potatoes into 1/8 inch slices



Michael Kiehl supplied a magnificent variety of gift plants for us



Put potatoes in large saucepan and add cream, salt, pepper, nutmeg and garlic. Cook mixture over medium-high heat until cream is boiling, stirring occasionally (very gently with rubber spatula so you don't break up slices) When cream boils, pour mixture into a 2 1/2 or 3-qt. baking dish. Remove and discard garlic cloves. Shake dish a bit to let slices settle and then sprinkle surface with cheese. Bake in the hot oven until the top is

golden brown, the cream has thickened, and the potatoes are extremely tender when pierced with a knife, about 40 min. Don't worry if the dish looks too liquidy at this point; it will set up as it cools a bit. Before serving, let the potatoes cool until they're very warm but not hot (at least 15 min.) or serve them at room temperature."

Quality Water Equals Good Cultivation



and the handout from the seminar at the World Conference “Monitoring Growing Medium and Water Quality” by Wayne R. Pianta, Extension Horticulturist, Texas Agricultural Extension Service, I became very interested in the quality of water I was using.

For some time I have had trouble raising nice plants in the subfamily Tillandsioideae. I could coax them to reach maturity but the leaves had brown tips and they did not pup well. I checked into many facets of what I might be doing incorrectly but I could not figure it out. While at the Ninth World Bromeliad Conference, I attended seminars by Dr. Benzig and Wayne Pianta; both men touched on these types of problems. What they said set me to thinking back on something I had read in a Bromeliad Journal when I first became a member of the Bromeliad Society International (BSI). I checked back in the journal and sure enough found a reprint of an article by C.A. Wiley in Volume 38, Number 2 entitled “Water and Good Growing.” It is a very informative article and along with some reading in *The Biology of the Bromeliads* by David Benzig

I use water from one of the water treatment plants for the city of Beaumont, Texas, USA. I called our water department and was told that the water in the area of town where I live is from the Neches River and the analysis is pH 8.3 with a chloride count of 28 ppm. Most water in the United States delivered to homes through a water system is on the alkaline side. By adding calcium to the water and making it on the alkaline side, they save quite a bit of money on water main replacement costs. The chloride is added in order to control the bacteria harmful to people.

I had not realized how important the quality of the water I use is to my plants. For diagnostic purposes, the pH of the water is as important to a bromeliad grower as a blood analysis is

to a medical doctor.

We should acidify the water we use on our bromeliads. I have always made sure that the potting medium I use for my *Cryptanthus* is on the acid side by using an ample amount of sphagnum peat moss. Through my reading, I learned that the planting medium eventually has the same pH as the water it receives. Therefore, it becomes very important that we acidify the water to be used on our plants. To do this, we need to know about alkalinity, acidity, and the pH scale. A pH of 7.0 is neutral; pH above (more than) 7.0 is alkaline, and a pH below (less than) 7.0 is acid.



It is also important to know that a 1 point change in the pH scale means that the acidity/alkalinity changes by 10 times. For example, a 6.0 reading is 10 times more acid

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than 7.0 and 5.0 is 10x10 or 100 times more acid than 7.0. To properly acidify the water you will need a pH tester. The tester should cover a range of 5.0 to 9.0 on the pH scale.

You can obtain a tester from a pet store that carries aquarium supplies or a swimming pool supply company. One may be obtained fairly inexpensively or you may get a more expensive one that will test other properties of the water as well. Your pocket book and the detail of your testing program should be your guide.

Citric acid or white distilled vinegar (5%) can be used to acidify your water. Citric acid is available at most drug stores and white distilled vinegar (5%) is available at the grocery store.

The easiest way to acidify water is to use a proportioner, which injects a small amount of acid into the main water stream as you do your watering. There are a number of proportioners available on the market. The ratio of the proportioner you choose will determine the amount of citric acid to make your stock solution.

In this article we will deal with a stock solution and the amount to use for direct watering (pump sprayer or hand sprinkling can. Dissolve

one (1) ounce of citric acid in one (1) quart of water. This will make your stock solution which then can be mixed one=quarter ounce to a gallon of water when needed and can be used for direct watering. The quantity of citric acid should be adjusted until the pH of the water to be used tests within the range of 6.5 to 5.5. Using white distilled vinegar (5%), I found it took 2 teaspoons per gallon to bring my water from 8.3 to 6.5. Here again, you will need to check the acidified water before using and adjust the vinegar until your acidified water is in the range of 6.5 to 5.5.

The most important benefit of using acidified water is that it makes the nutrients available to your bromeliads. The nutrients found in most fertilizers are Nitrogen (N), Phosphorous (P), Potassium (K) plus trace elements (sulfur, calcium, magnesium, chelated iron, manganese, boron, copper, and zinc). All of these elements are important to the healthy growth of bromeliads. Nitrogen in a usable form is the primary nutrient responsible for vegetative growth. Phosphorous, a mineral element has a stimulating effect on new growth, root development and seed formation. It may also

contribute to foliage color. Potassium aids in flower production and resistance to disease and cold by developing firm growth. The trace elements are needed to help develop strong cell walls, membrane construction, plant fiber and chlorophyll molecules.

The pH range where these elements become available to bromeliads is

N	6.0 to 8.0
P	6.5 to 7.5
K	5.0 to 7
Trace	6.0 to 8.0

Each of the elements, so important to the nourishment of the plant, becomes unavailable outside the pH ranges listed. They become locked in by the organic material in the potting medium and are not available to the plant.

The research and articles I have located on the subject so far have discussed epiphytes and tank-type bromeliads. It is just as important for terrestrials, such as our lovely Earth Stars, as it is for the epiphytes or tank-type bromeliads. It is true that the potting mix takes on the pH of the water it receives. It certainly becomes extremely important to monitor the water used on Cryptanthus.

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We must also be alert and check the pH of the water to be used after we add the fertilizer to it. I ran pH tests on three different fertilizers that I have on hand and found these results.

Acidified water to 6.5

Peters 20-20-20 acidity remained the same

Peters 15-30-15 acidity remained the same

Hyponex 15-30-15 acidity remained the same

In one of the articles I read, they had used Ferti-Lome African Violet (low salt) 12-36-14 Fertilizer and it changed the pH of the acidified water from 6.5 to 7.3. From this result, it shows that we need to be careful if we are to obtain good results from acidifying the water.

Bromeliads have a very low metabolism level. In their native habitat, nutrient levels are generally less than 50 parts per million which translates to about 10% of the amount listed on most fertilizers as the recommended amount to use. We should use $\frac{1}{4}$ of the recommended amount. This will bring it a lot closer to the level the plant can metabolize.

By using too strong a solution, the least damage we can do is lose a lot of the “goodies” we so thoughtfully provided for our plant to use. The worst damage is that we can cause a condition that prevents the plant from taking up a specific element when it is needed by the plant.

A great deal more information is needed to further our understanding on this subject, especially as it relates to Cryptanthus. The relationship of the potting mix as well as the water quality must be understood as they relate to the biology of the Cryptanthus and their specific needs. It is my hope that my limited research into this will spark the interest of someone much more qualified to do the studies than I am. The project of the pH and the ingredients of the potting mix I use have been moved to the top of my “Things to Do” list.

This excellent article that applies to all plants was written by Jewel Jennett and is reprinted from the summer 1990 Cryptanthus Journal.

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 Charms at the meeting or mail to Harold. See back page of newsletter for details.

Pacific Orchid Exposition

The San Francisco Orchid Society will have their annual Pacific Orchid Exposition this year from **20-23 February**. The theme this year is “Orchids and All that Jazz”. Our society participates in this event as a vendor and we will need some of our members to participate. We need help in staffing our sales table for the duration. Our booth is small and we need only two people at a time. We will have a signup sheet at this month’s meeting for you to volunteer.

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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