



BROMELIAD SOCIETY OF GREATER CHICAGO

THE BSGC NEWS

September , 2012

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WEB SITE

<http://bromeliad-chicago.org>

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Lori Weigerding

Our next meeting will be October 14th at the Botanic Garden. We will meet at 2 pm at the greenhouses for a tour by Gabriel Hutchison. After that we will vote on our slate of officers. If you can't make the meeting but would like to vote, you can email your vote to any of the officers. The slate is: President Lori Weigerding, Vice-President Martha Goode, Secretary Roberta Torossy and Treasurer Paula Darning. We will discuss the November luncheon and any bromeliad questions that you have.

At the August meeting we discussed our money market fund. We also discussed ways to spend our money. Anne gave some plants away which was appreciated by the members. Martha brought plants that were raffled off at \$1 for each ticket. Paula provided refreshments. Thanks so much. We decided to go with a joint money market account at the credit union with Paula and Martha as the account holders for four years.

President's Column

WOW we certainly had a wonderful meeting! I hope everyone that attended had as much fun as I did! We had a wonderful selection of plants and those articles that Paula brought from out of her basement were wonderful! We'll have to see how we use them in our next show. Well Martha has had success in getting us a tour of the hot houses at the Gardens for October. Make a list of questions that you have about plants, fertilizer, etc., and maybe he'll have some answers.

I'm so glad to see more people at the meetings! Please continue to come and share your ideas for the club. We will listen to all suggestions and try some if we can! Remember also that November is our luncheon. We had talked about doing it some where else, what do you think? We also need to vote on our slate of officers too! Need to do it right this time!

Pretty soon the temperatures will be lower and we'll be wishing for these hotter days!

Take care and see you all in October!



Anne Coughlan's Hanging

Lori Weigerding

Bromeliad Meeting
September 14 2012

Sunday:

2:00 pm.

Attendance: Larry Clever, Lori & Jeff Weigerding, Anne Coughlan, Priscilla Segel, Julianna Jimenez, Martha & Steve Goode, Roberta Torossy, Marjorie Leon, Paula Dering, Del Busczynski and Maureen Collins.

Meeting minutes: Meeting began at 2pm

Martha began this meeting with plants which were auctioned off to members. Paula brought in an assortment of vases, glasses, and old cups and saucers, for members to choose from in which to display their plants. As the tickets were pulled the members chose from an assortment of plants that they wished to have for their home and then they selected a container to display the plant in. The proceeds of this auction benefit the club and the tickets were only \$1.

There was a brief business meeting after the discussion centered around the Cactus Society coming together, with our group for the show and sale next year on July 20th and 21st. We will sponsor a few youth from a

tutoring group in Chicago next year during our show.

Martha had a good idea ,to display our hanging plants at the show on a peg board with hooks. It was agreed that we would do that. Anne showed us her tillandsias mounted on a hemp macrame hangar. She suggested items we could sell: some small grapevine wreaths, a small basket, etc. She looked on the following website: www.factorydirectcraft.com (Factory Direct Craft) for items we could purchase.



Tillandsia brachycaulos x concolor
Picture from Marjorie Leon

Paula and Roberta brought in snacks.They were greatly appreciated.

At 3:00, we went on a tram ride around the garden and it was very nice. Members appeared to enjoy it very much. Our next meeting is October 14th.

Minutes taken by Roberta Torossy

The days and nights are getting cooler so you need to bring those bromeliads inside. At the September meeting Anne shared how she takes care of them. She puts her plants in a black garbage bag with a dog flea collar. She sets the bag in the garage for three days. She found that this is an easy way to keep from bringing bugs into the house. If she does get bugs, Anne found that spraying with 70% alcohol works better than insecticidal soap and she doesn't have the lingering odor.

In the early summer because of the heat and very little cloudiness the color of my plants faded. In the middle of July my plants had gotten back their beautiful colors. In winter, they will lose a lot of their color again. The article "Colour my World" by Michael Romanowski explains what compounds are responsible for the colors in our plants. His article was originally printed in the Victorian Bromeliad Society's Bromeliad Newsletter in August/September 2003.

Colour my World

When one considers what attracts most enthusiasts to bromeliads we readily arrive at an expression of colour. The presence of colour within bromeliads has

numerous functions which all combine to produce a plant of stunning visual capability. The reasons for colours in bromeliads falls into three categories. These are: pollination, water retention and solar radiation compensation in various forms.



Picture from www.fcbs.org

We have all been dazzled by the splendid colour of bromeliads in flower. The shape and colour of the inflorescence may well be described as the world's best advertising ploy. Employed in this purest form of advertising are sepal and petal segments designed to produce colour, texture and form to lure the viewer to its side. Comparison to the packaging in many of our retail outlets is not out of context. A complex evolutionary game of chance has produced various colours, shapes, textures and scent that is geared to capture the desires of the right pollinator, in much the same manner as commercial bright packaging catches our attention to arouse interest, with the end result being to pollinate the plant in question.

Substantial research has been undertaken as to what substances contribute to the colours that we see. The topic is somewhat complex and all is not yet known. However, the reason why we are able to see colour revolves around the nature of light. Light can only have an effect in the colour of flowers and plants if it has been absorbed by various chemical substances within the plant. Of the many substances which carry out the functions within the plant some will have what is known as a 'characteristic absorption spectrum', which identifies which of the light colour bands are absorbed or reflected, thus giving us the colours we see. These substances are commonly referred to as pigments.

Basically, four different groups of compounds are responsible for the colours we see around us. The first group is recognized more for what it does not do, rather than what it does. Where there is no absorption of light in the visible part of the light spectrum, all the light is reflected and the object will appear to be white. The next three groups of pigments do absorb light, but only in particular spectral bands or colours. The first of the three which we will discuss here is chlorophyll. Apart from its function in photosynthesis, the light it reflects gives plants the appearance of being green. The second group are the carotenoids. These pigments are largely responsible for the many forms of yellow that we see in various plants. Carotenoids are frequently found in chromoplasts, structures in the cell which brightly colour fruits and flowers. The bright yellow of *Vriesea ospinae*

and *V. Maxoniana* are but two examples. It is also why lemons and bananas appear vivid yellow. The final group are known as anthocyanins and are responsible for the palest pink, reds, blues and flamboyant purples. The presence of these compounds singularly or in combination with each other or with other compounds gives us the wide range of colours that we see in many bromeliads.

The brilliant display of floral bracts and flowers, however, is not the only source of colour within bromeliads. Quite often many bromeliads are grown for their colourful foliage. Foliar colour is directly related to pigment distribution and function. Very often we may determine climatic conditions from the colour we find in bromeliad foliage. We can all bear testament to the fact that many bromeliads vary immensely in colour and form. From this Rauh suggests that we can ‘deduce the exact climatic conditions under which various species exist.’

For example, tillandsias, of which the vast majority appear silver-white or grey, do so due to heavy concentrations of absorbent scales whose function is to “hold air between them and cause a total reflection of light.” The colour of the pigmentation of these plants may help reflect excessive solar radiation, thus helping to conserve valuable moisture. From these facts, we may deduce that both *Tillandsia tectorum* and *T. Cacticola* would reside in a much drier habitat than *T. Polystachia*. *T. Polystachia* we would assume as being indigenous to an area with protection from direct light coupled with higher rainfall.

Rauh goes on to explain that “banding and diagonal striping on various species such as *Aechmea fasciata* and *Billbergia zebrina* occur due to alternative zones of both heavy and light areas of scale development. Plants with what is termed ‘discoloured leaves’-i.e., a green surface and red underneath-for example *Aechmea fulgens* var. *discolor*, are so designed as to trap the maximum amount of light so that photosynthesis may occur most effectively. This occurs in this situation because of the increase in light that results from reflecting back light that is not used the first time through. That is, light that is not effectively utilized by the surface of the plant is reflected back by red pigment, enabling the bromeliad to photosynthesize in areas that would be considered to be rather low on light. Striped or variegated plants such as *Neoregelia carolinae* forma *tricolor* appear so because alternate stripes of tissue contain chloroplast or are chloroplast free. Fenestrations,



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as shown in *Vriesea hieoglyphica*, *V. Fenestralis*, and *V. Fosteriana* are designed as a type of window, allowing light not used on one level of the leaves to penetrate to lower leaves that may be excluded from direct sunlight, thus increasing the ability of the bromeliad once again to photosynthesize more effectively. In these cases, chloroplast-bearing tissue covers leaf veins while other tissue surrounding the area has less chloroplast. The windows (grid pattern) are thus a faithful map of leaf veins. Many bromeliads which are often quite green in appearance and not flowering, quite often develop colour which corresponds with direct light intensity. For example, *Neoregelia carolinae* forma *tricolor*, or even *N. Carolinae*, may develop a red tinge to the foliage in direct sunlight. *N.*'Red of Rio' will appear green in low light, but develop a vivid red colouration when grown in very bright light or direct sunlight.



Billbergia 'Berry Blast' photo by L Vinzant

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An explanation offered for this phenomenon revolves around the fact that, as with humans, these plants are producing a form of solar UV protection. In our own species, humans produce a pigment known as melanin to protect their skin in situations of high UV. Plants produce the pigment anthocyanin along with some carotenoids as their equivalent to melanin. Various plants' ability to regulate their concentration of screening pigments is adaptive. Factors which determine the intensity of colouration in these situations can vary with seasonal factors, i.e., plants will produce greater amounts of pigment in the summer months compared to the winter because of the stronger UV in summer months. The position of plants may also determine the amount of pigment produced by a plant. Generally, plants situated

in more exposed positions will be more intensely coloured than those of the same species in more shaded areas on the same tree.



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Please remember that you can always come to the World Conference in Orlando as a late visitor. You can see really beautiful plants in person. They do look much better in person. We should have a report on the World Conference in the next newsletter.

