

Far North Coast Bromeliad Study Group N.S.W.

Study Group meets the third Thursday of each month

Next meeting 16th February 2017 at 11 a.m.

Venue: PineGrove Bromeliad Nursery

114 Pine Street Wardell 2477

Phone (02) 6683 4188

Discussion: January 2017

General Discussion

Editorial Team:

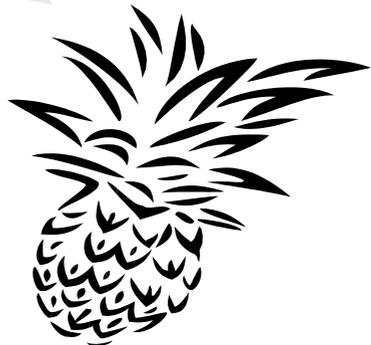
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Meeting 15th December 2016

The meeting was opened at approximately 11.00 am
The 20 members and one visitors present were welcomed.
A total of two apologies were received.

General Business

All present were welcomed to the meeting, best wishes for Christmas and the New Year were passed on. Everyone was thanked for their continuing participation in our **Show Tell and Ask** discussions and for their donations of plants etc. for the raffle.

Ross then spent considerable time, as he always does....., trying to extract co-operation in the way of articles for the newsletter and more ideas for discussion matters, etc for the New Year and as expected there was a deathly silence!!! So there ended the year on the usual happy note..!! however maybe because it was the Christmas season he may have felt in a generous mood and he gave up the fight pretty quickly - we think it may have been because he saw all the food on the table.....!!! BUT and it is a good "but" we all noted that there had been a huge improvement in the number and quality of decorative entries in the competition and that generally we always learn from others' experiences and have great discussions (usually not on the agenda ..of course...!!)

This years Christmas get together although hot and humid was very enjoyable with plenty of yummy food supplied by members. Helen once again organised the meat platters, B.B.Q. chickens, bread rolls, drinks. Helen also decorated the tables and surrounding area. A small glitter retro Christmas tree was also decorated with poinsettias, tinsel, gold and silver stars and a large gold star on top. John, Trish and Lesley also added to the surrounds of the Christmas tree (p.7), John with his *Vriesea splendens*, Lesley with her *Tillandsia flabellata* and Trish with an *Araecoccus flagellifolius*. Trish supplied some *Araecoccus* growing hints for the lucky recipient of her plant as she knew he struggles growing this particular species. (p.5)

After lunch we had the popular vote presentation, details page 12, followed by our plant / gift exchange with everyone contributing a good selection to choose from. Members went in order of attendance throughout the year, the more meetings attended the higher up the draw list you were placed to select a gift/swap.

A compilation of notes/thoughts/words of wisdom offered from a few attending members at the Christmas party, some tongue-in-cheek chuckles, good to see we still have our sense of humour after a hot summers day, no snow here.

Welcome to the New Year - 2017

Hopefully another exciting year ahead pursuing the study of Bromeliads with our Group under the guidance of Ross and other enthusiastic members who have had hands on experience in seeing these delightful plants in situ in their countries of origin. We are so fortunate to have these willing members share with us their experiences and amazing photography in the hope we may broaden our knowledge and grow some of the rarer and unusual Bromeliads.

We particularly thank Doug Binns and Les Higgins for their wonderfully informative contributions.

Doug has intrigued us with his adventure stories as well as the fabulous displays of the subject plants of his lectures and articles. In particular, the Orthophytums, occasionally with some for sale, you can only imagine the enthusiastic rush!

Les has guided and so gently explained the chemical formulas, ratios, the acidic and alkaline qualities of potting mediums and all of the necessary scientific and agronomic qualities and quantities of what we use to make our Bromeliads grow under our climatic conditions to the highest standard, or maybe just grow, with infinite patience.

To Ross and Helen our sincere thanks for having the meetings at "PineGrove" we appreciate your generosity very much.

Helen, a special thank you for all the unseen things you do, it is especially appreciated.

To Ross, a special thank you for running our meetings and always having those unusual bromeliads in flower for discussion at the meetings. This, can only occur because Ross has an extensive collection accumulated over many years and we are the beneficiaries.

To the McAteers, Coral and Gary our special thanks and appreciation of your very generous contributions to the Group.

To Debbie, Jeanette and Marie who so generously give of their time, often unseen, thank you so much, and to all our members who regularly attend, bring cakes and slice for our super morning teas, donate plants for fund raisers and raffles a special thank you, for without this we would not have "our" Group.

To our very special proof readers for whom we would not have a Newsletter with its few errors without them, Trish, Kay, Helen and Lesley a huge thank you.

Happy 2017, everyone and may this coming year be the greatest!!!

How to Ease Sunburnt Bromeliads - Update by Paul Turvey 2017

Update January 2017: still as previous article (FNCBSG NSW Dec. 2016), but now with some solid results using citric acid. I've done this now with a thousand or so seedlings continuously for up to two years starting from germination, with a hundred or so bromeliads in one shade house for a year, and with all the hundreds of bromeliads in the garden for the last 6 months. All of them show the best growth ever for me, especially the seedlings, and with the least leaf-end die-back on the few sensitive Vrieseas.

Some bromeliads like *Aechmea chantinii* are doing fantastically better with the green clones developing a beautiful dark green to show off the silver stripes. A bunch of different clones had always struggled to get much more than greenish-yellow before over quite a few years, regardless of fertilising, so I suspect the abrupt change is a pretty sure sign of what was general nitrogen starvation that has now been corrected by the citric acid in the water.

I'm still getting a bit of leaf-end die-back on a couple of the most sensitive Vrieseas, but these were long-established plants that would have had a build-up of non-chelated calcium before I started the treatment. I'll have to wait until I can grow new pups on the water + citric acid diet before I make my mind up about those.

Where do I Find the Dates

If you're travelling interstate on holidays or overseas to New Zealand or just wish to go to a Bromeliad Show, a Conference or a local Society meeting during your travels - where and how do you find dates suiting your travelling period ?

To find most of the info one is seeking from actively involved Societies/Groups use the link here <http://www.bromeliad.org.au/DIARY/Diary.pdf>

Your local Society / Discussion Group Delegates of the "Australasian Bromeliad Council" should be able to assist with additional contact information as not all Societies / Groups are listed and not all those listed have an activated contact link back to the BSA's list. Not all times and addresses are shown for the various Show venues or full Meeting information. Therefore it is important to start planning your trip early to allow your Group delegate time to gather the necessary information for you to help make your trip a successful one.

As more Societies / Groups get involved hopefully we'll see the DIARY site expanded upon with all information readily available to everybody.

How to Grow *Araeococcus flagellifolius* by Trish Kelly 2016 A Christmas Gift With Hints to an Unsuccessful Grower

I am an epiphytic bromeliad from tropical South America and require similar conditions created for me to grow in the East Coast's, sub-tropical climate and urban conditions.

I require an elevated sheltered position away from cold south westerly and southerly winds and frosts, plenty of sunshine particularly early morning to midday, then shade particularly from trees that still provide filtered light. I prefer a fine growing medium that replicates leaf litter, a mixture of fine, medium for moisture retention and coarser material like fly ash, bark which allows for air and lightness.

I prefer growing outside where my foliage can grow long and whip like as my name suggests. I require plenty of moisture in the growing season, September to May, that is as in tropical situations daily rainfall or replicated by daily watering or growing in a water bath, a shallow container which holds 2 - 3cms of water in which I sit and grow. This allows for necessary humidity and photosynthetic function. If you have a very wet (raining) situation remove the container temporarily.



Photo by: Ross Little

Provide elevation using an upright stump or any other stand such as the stand for a birdbath, as *Araeococcus* like to spread their wings, I need at least 1.5 mtrs across, my foliage is quite brittle and will snap if handled roughly or have other plants too close.

I tend to sulk and not grow until everything is to my liking and I definitely won't flower, so when I grow and flower you definitely know you are on the right track. A north facing sheltered position with early morning to midday sun then shade suits me fine and I also respond well to regular fortnightly half strength sprayings of soluble Miracle Grow or Powerfeed.

Please do not tie me in a tree and hope I will grow, the climate here is far too dry unless we are in a cyclone season! And please remember me when there are major cold snaps on the Tablelands, you know, when Guyra and Glen Innes are -9.0°C to -10°C and the wind is coming my way.

Please make sure you look after me and I will reward you !



John Crawford
Open
Champion
2016



Ted Devine
Novice
Champion
2016



Keryn

Michelle

Jeanette

Dave



Trish

Kay

Marie



Helen

Coral

Gary



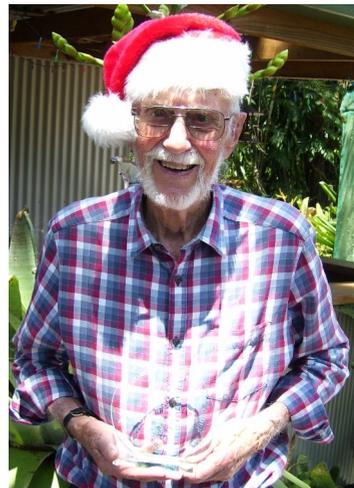
Debbie

Jimmy

Shirley



Kay Daniels
Judges Choice
Champion 2016



Laurie Mountford
Decorative
Champion 2016

Photos by:
Ross Little



Les



Jennifer

Neoregelia 'Skotak's Orange Crush' by Derek Butcher Jan 2017

Many of you may be growing this as 'Orange Crush' which is a variegated plant with the looks of *Neo. carolinae*. But then you might be growing the same plant as 'Freddie'!

The story begins in 2003 when I noticed that Deroose were selling 'Orange Crush' from their website. ► I captured the name and photograph for the BCR (Bromeliad Cultivar Register). I am not sure when and if it got exported to Australia but it was wide spread in Florida. One year later we obtained a plant called 'Freddie' from Garden World in Melbourne. They had imported it from the Philippines but had no detail as to parentage or origin. It was impressive so I took its photo and it was recorded in the BCR. These days, I would assume that 'Freddie' is more widespread in Australia than 'Orange Crush'.



Now for the crunch. Chester Skotak now tells us that these are the same plant. I have always been critical of Rose growers who see nothing wrong with having different names for the same plant depending on the country it is sold from but at least this detail is recorded. There is an ICNCP (International Code for Names of Cultivated Plants) which many of the keen Bromeliad growers try to follow but it is frustrating when some of the nurseries ignore the rules. Perhaps this is because it is a voluntary system and there are no financial penalties. We know that this doubling up of names occurs. For example, Deroose with *Vriesea* 'Tawi' and *Vr.* 'Delphi'. Check these names on the BCR.

Why 'Skotak's Orange Crush'? Just as Botanists know you cannot have a plant with two names the same applies under the ICNCP rules which is one of the reasons why we have the BCR so you can check if you are interested. 'Orange Crush' is listed as having been used by Mulford Foster before 1980.



Remember that 'Freddie' or even 'Freddy' is now officially an illegitimate name. However, in practice the name will persist. You are warned of these sorts of instances to save you having duplicate plants with different names. Please advise the BSI Registrar if you know of similar circumstances.

◀ Neo. 'Skotak's Orange Crush' as 'Freddie' by Butcher

A Brief Study into How Plants Function by Les Higgins 2017

Part 1: Temperature and Humidity

Humidity is the water vapour content of the atmosphere, usually expressed as Relative Humidity. It is the percentage of the vapour present to the maximum amount the atmosphere can hold at the prevailing temperature.

The writer experienced two days and one night on Peru's tropical coast. The locality is arid and rain is probably a rare event. Intense solar energy from a cloudless blue sky made each day very hot. Water vapour rising from the ocean is undetectable. Humidity is zero. Without cloud cover to retain the earth's heat the night temperature plummeted. During darkness the atmospheric water vapour condensed into "Freezing Fog".

A *Tillandsia sp* and a few other Cam plants survive on this inhospitable Peruvian coast. The name CAM is an acronym of **Crassulacean Acid Metabolism** and is a feature of many plant species. CAM plants open their stomata during hours of darkness for acid conversion photosynthesis. Freezing Fog provides moisture for photosynthesis and also prevents vapour loss through the open stoma.

Direct sunlight causes leaf temperature to become excessive. As CAM plant stomata is closed during the day there can be no leaf temperature reduction by transpiration; instead CAM plants rely upon the emission of long wave (infrared) radiation and physical changes. Flat rosette plants are capable of raising their leaves to assist in heat loss.

Temperature control is essential for both CAM and Non-CAM plants. Air moving across the leaf taking heat from its surface is called **Sensible Heat Loss**; this happens whenever the temperature of a leaf is warmer than its surroundings. **Evaporative Heat Loss** occurs because evaporation of water requires energy. Heat is withdrawn from the leaf as water vaporises. These two heat losses are important processes in the regulation of leaf temperature. The ratio of the two is known as **The Bowen Ratio**, determined by **sensible heat loss** divided by **evaporative heat loss**. Heat load is dissipated by emission of Far Red Radiation.

Respiration is a function of temperature and the interaction between **photosynthesis** and **photorespiration**. Both photosynthesis and photorespiration are inhibited at high temperature. While temperature increases photosynthetic rates decrease faster than respiration rates decrease. The temperature at which the amount of CO₂ fixed by photosynthesis equals the amount of CO₂ released by respiration is known as the **Temperature Compensation Point**.

A suitable growing temperature for most plants is between 20°C to 30°C. Petioles of tropical plants when chilled below 10°C often cease leaf translocation. Popular books claim that Cryptanthus survive a temperature of 2°C and even lower but this is foolish information. At -2°C true freezing begins and the liquid in a plant forms into large intracellular ice crystals that puncture and kill the cells. Growth ceases whenever temperature becomes too high or too low and 5°C should be regarded as 'bottom' temperature for Cryptanthus and possibly all Bromeliads.

The writer's home is in a bushland clearing where summer temperature peaks at 50°C. Between November and March temperatures in the shade houses consistently reach levels that are of a concern. The floor of the shade houses is a layer of durable plastic overlaid with bricks. Temperature reduction is achieved by soaking the floor with poor quality tank water. Plants are not watered. The plastic retains the water and vapour rising from the wet bricks creates humidity that modifies the temperature.

High temperature causes most Cryptanthus change colour. By changing colour photosynthesis is modified and many plants no longer continue to grow. Cryptanthus that do continue growing may resort to excessive offsetting while still small in size. The year 2016 is the hottest ever recorded and by December the majority of the writer's Cryptanthus have transformed into shades of red and brown. Many of those plants are in a quiescent state. *Crypt. beuckeri* is the most badly affected of all the Cryptanthus; its shape has become ragged and the mottled green leaves have turned pink.

'Spiky' species of Cryptanthus are CAM plants. Until they flower they look like Dyckia and are best grown as Dyckia. Those owned by the writer are green or silver in colour and include: *Crypt. bahianus*, *Crypt. coinagoi*, *Crypt. leopolohorstii*, *Crypt. tiradentesensis* and *Crypt. warasii*. As these plants don't prosper in humidity they are on an outside table and protected by red shade. Whenever a day of high temperature is anticipated they are given an early morning brief watering to prevent the possibility of leaf-end die back.

Nitrogen is a key element in many of the compounds present in plant cells. Nitrate (NO₃) is the foundation of sturdy plants making carbohydrate tissue that copes with both high and low temperatures. Urea/ ammonium (NH₄) is a popular ingredient in traditional Australian commercial plant nutrients. NH₄ value is that it makes rapid plant growth. NH₄ stresses the plant in heat and becomes toxic in temperature below 20°C. Oversized NH₄ soft tissue is not only temperature sensitive it is attractive to pests and disease. NH₄ is to plants what hamburger and Coca-Cola is to children!

Nursery persons need to grow plants as quickly as possible to a saleable size. The more tropical the nursery location the more NH₄ is used. Many plants are said to have been killed by cold during winter or die in summer heat but the probable culprit is excess NH₄. To ensure survival of tropical purchases they over-winter for the first year in the warm temperature of the writer's domestic living room.

During autumn the writer's Cryptanthus and their houses are prepared for winter. Cover is reduced to one layer of white shade cloth. As cold intensifies a thin non-UV stabilised clear plastic (\$1 Painter's drop sheets) is added and secured with Duc Tape™. The plastic maintains maximum light intensity, improves overnight temperature, slows air movement and prevents rain wetting the plants. Although some leaves start shrivelling no water is given. As daylight lengthens the non-UV plastic begins to tear and plants become acclimatized to the prevailing temperature and rainfall.

Vernalization is the process whereby flowering is promoted by an accumulation of low temperature hours followed by an extended period of light. (For deciduous fruit trees the colder the winter the better the summer crop). During winter the writer's Cryptanthus are vernalized; no water for between six to eight weeks with nights at a minimum temperature of 5°C. Lighting is 'Short daylight', less than 12 hours. Upon completion of vernalization plants are watered and relocated in a room of 'Long daylight', at least 14 hours light and a minimum temperature of 18°C. Vernalized Cryptanthus quickly erupt in flower buds followed by vigorous growth and pups in profusion. Cryptanthus overwintering in the same room don't show a similar dynamic growth.

Questions that need an answer include:

- 1: Do all Bromeliads benefit from vernalization?
- 2: What effect does temperature and humidity have on individual Bromeliad species?

Next month: Air and Water.

Editors note: We are a Study Group. What observations have members made? Please write a note or tell us at a Meeting and share your information with all of us. No matter how small, all contributions are valuable. Our editorial team can collate and embellish sentences from several members to make composite articles of local knowledge. Please make vernalization experiments.

Next year, with your aid, we could have an article:

[Bromeliad Vernalization on the Far North Coast of N.S.W.](#)

Authors - FNCBSG Editorial Team *et al.*

TROPHY PRESENTATION 2016

Novice – Ted Devine

Ted, your persistent and keenness in learning how to grow your bromeliads has paid off, a well deserved win, we look forward to seeing you in the Open Section.

Open – John Crawford

John for the second year running has won this section with his beautiful and well grown plants - Congratulations.

Decorative – Laurie Mountford

Laurie entering his creations in this section each month received the points to win. Well done.

Judges Choice – Kay Daniels

Kay was surprised at winning the section commenting “It must have been close”. Yes! Kay it was. Congratulations.

At the 2015 trophy presentation Ross made the comments “its about time the boys stepped up again” and “it would be interesting to see the results of next years competition”. Well Ross the boys did step up! winning three out of four sections, so now it is the ladies turn.

The bromeliads entered in this years competition, as in previous years have been outstanding well grown plants. Hopefully 2017 should be another exciting year to show off our growing accomplishments.

Once again we are reminded:

- One Bromeliad per entrant - person / couple.
- First time entrants are to decide if they are a novice at growing bromeliads or a reasonably experienced grower and therefore enter the appropriate section Novice or Open (one section only).

In addition you may also enter the Decorative Section, one entry per person. Entries must be in a decorative container, a decorative setting or a dish garden etc. embellishments may be used, but not as the main focal point of the setting.

Clearly print your **full name** and Bromeliad name under appropriate headings on the Competition Entry Sheet, this will make the point scorers job much easier.



Let us make 2017 another year of helpful friendly discussions.

