

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

Study Group meets the third Thursday of each month

Next meeting April 19th 2018 at 11 a.m.

Venue: PineGrove Bromeliad Nursery
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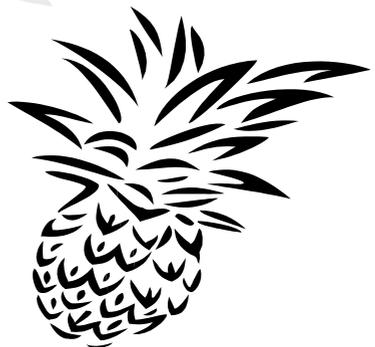
Discussion: March 2018

General Discussion

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Meeting 15th February 2018

The meeting was opened at approximately 11.00 am

The 11 members were welcomed.

A total of eight apologies were received.

General Business

There was no re-election of Officers in the January meeting for 2018. Kay and Trish resigned as part of the Editorial Team wishing to sit back and enjoy the meetings and absorb more of the talks. Without any volunteers to record the minutes of the meeting it means a loss of at least the first three pages of our Newsletter. Les is now attempting to record the minutes of the meetings, this is a stop gap measure only. We need one or two volunteers please.

Thank you Kay and Trish for your four years of writing our Newsletter's introduction / meeting minutes, it has been very informative and a pleasure to read. Thank you to every member who assists in making our meetings so worthwhile.

The meeting opened with eleven members present and it became a friendly group chat that everyone enjoyed. Discussion included how our membership could be increased.

Ross has offered to compile a flyer that can be distributed to other Garden Clubs, Orchid Societies or post in your local shops window / garage window or a public notice board. Ross has a stall / site at the local Car Boot Market each month where he can hand flyers out also. Declining membership numbers is mostly due to natural attrition, often the passing of one member actually cost a greater number e.g. partner or travelling companion/s. It is up to all of us to try and encourage new members to our Group for us to pass on our knowledge and experience gained over the years.

The Groups financial situation at present is quite healthy even though we only rely on a 'gold coin' donation by attendees, the raffle and a small amount of sales commissions each month. Our Newsletter is our greatest expense, to maintain it at its present status we need to boost our income which could be accomplished by the membership drive.

A very lively discussion about our exhibits followed. Of particular concern is the Decorative section, Les and Kay both believe that excessive ornaments distract from a display and would like to see more "Floral Art". That is flowing forms of shape and harmony, let the plant tell the story in the language of botany and the colours describe emotion.

There is increasing interest in a Tillandsia Popular Vote section, however there is a problem of space. We originally had a bench for Open and another bench for Novice. To accommodate Decorative the bench for Novice was halved, a Tillandsia section would halve the Open sections space.

Members discussed the best use of the limited space and how to consider the needs of all members wishing to exhibit.

Do we allow a member to exhibit in:

- Open AND Decorative AND Tillandsia
- Open and one other section (excluding Novice)
- Novice AND Decorative AND Tillandsia
- Novice and one other section (excluding Novice)
- Limit size of each exhibit.

It was agreed that due to the lack of space that excessively large sized exhibits may be placed in another location with notice to voters. Other opinions were put into the "too hard basket" and left open for further discussion next meeting.

There was information regarding the latest changes to importation restrictions. Although it is disappointing to further reduce plant importation there was full agreement that it was better to stop importations rather than put our collections at risk. However with the restrictions most Bromeliads except Tillandsia are able to be imported from Xylella free countries providing the relevant paper work is completed e.g. Phytosanitary Certificates etc. Importation of seed is the latest to be included on the banned list. Before trying to import Bromeliads into Australia always check the DAFF website for up-to-date rules and regulations, also which countries are on the Xylella free list.

Show, Tell and Ask!

After lunch we indulged in some "Plant Admiration", first of all we were privileged to see some of Helen's Tillandsias. The smallest one, no more than the size of a 20 cent coin had flowered, was previously known as *Till. bryoides*, for those who haven't changed their labels it is now *Tillandsia minutiflora*. Another being shown in flower reminded us of our recent loss of a friend *Tillandsia* 'Laurie'. Next up was *Tillandsia brachycaulos*, a little post floral but still with enough colour for a discussion on colour change from its grey/green to glowing red when it comes into flower. Ross mentioned seeing these growing throughout Central America with one tree in particular a great memory (article page 12). One cute little plant with white petals had lost its label, later identified as *Till. remota*. (photos p.7)

An inquisitive member found some of Ross' new acquisitions in their hiding place (they weren't really hiding, just tucked out the way a bit) and brought one out enquiring about them. *xVriecantarea* 'Julietta' (correct as per BCR entry) or is that *Alcantarea* 'Julietta' (incorrect as sold commercially) ? On the BCR the parentage is stated as *xVriecantarea* 'Volcano's Mist' x *xVriecantarea* 'Volcano's Mist', now what is confusing is where is the *Vriesea* in the formula to make it a bigeneric, *xVriecantarea*. Back in the late 1980s *Alcantarea imperialis* x *Vriesea* 'Poelmanii' gave rise to *xVriecantarea* 'Eggplant' which was crossed with *Alcant. vinicolor* creating *xVriecantarea* 'Merlot' and its grex sibling *xVriecantarea* 'Volcano's Mist'. Self set seed from 'Volcano's Mist' gave us 'Julietta'. Confused yet ? That bit of *Vriesea* in the mix has supposedly gone a long way. If at all, I still can't see it in the photos of *xVriecantarea* 'Julietta' on the BCR. I'll have to wait till it flowers (WTiF), butcher it and check its flowers. Commercially it's sold as an *Alcantarea*, but confuses us all. I thought it was a *xVriecantarea*, but not everybody thinks so apparently and believe from studying the flower structure that it is pure *Alcantarea*. Another consideration here is that bigenerics usually become mules (sex parts don't always work) but this "mule" kept accepting pollen from additional parents. We wouldn't have such confusion if hybridisers were to assess their results and be honest with themselves and admit that putting pollen on a stigma doesn't necessarily guarantee that the cross has been achieved.

John presented *Tillandsia* 'Bob's Amigo', a beautiful pot grown plant showing its brightly coloured multi-paddled inflorescence is a hybrid of *Till. jalisco-monticola* x *rothii*. The plant presented is a remake by Bob Hudson of Cairns Australia of an older hybrid created by John Arden known as *Tillandsia* 'Amigo'. In 2009 Bruce Dunstan acquired small plants of Bob's Hudson's cross from an Australian Conference sales area, he grew and flowered them eventually wondering if the parentage used in Bob's cross was the same used by John Arden as the plants looked a little different. In the BCR we read: Derek Butcher has suggested, as this plant is a remake of a registered hybrid we should consider calling it 'Bob's Amigo' as it allows us to convey that it isn't a plant of the original cross but something very similar. Derek has also mentioned that "*Tillandsia rothii* is thought to be a hybrid itself with potential parents of *Till. jalisco-monticola* and *Till. roland-gosselinii*. Another little complication is that *Till. rothii* can vary when they have been collected from nature. Many species vary in nature across their range and different forms are cultivated by individuals across the globe. We can't guarantee that a remake of a cross will produce the same progeny unless exactly the same parents are used and we must remember the dance of the chromosomes! (photo p.9)

John followed on with three delightful pink *Neoregelias* informing us that there are more than 70 pink *Neoregelias* registered with the BSI, the three he brought in for discussion were:

Neoregelia 'Pink Fairy Floss', obtained from Monica Mead 5/6 years ago. A Grant Groves hybrid of 'Pink Sensation' x 'Pink Sensation' sibling.

Neoregelia 'Pink Sensation', obtained from Jennifer Laurie on 15/9/2016. Another Grant Groves creation albeit with unknown parentage.

Neoregelia 'Sexy Pink', obtained from the Olive Branch on 2/4/2017. This one is a Margaret Paterson hybrid of 'King's Ransom' x 'Gold Fever'.

There was some confusion with the pink *Neoregelias* brought to our meeting due to their close colour similarities, it was hard for some members to differentiate between them. The Bromeliad Cultivar Register states *Neo.* 'Pink Fairy Floss' is possibly identical to *Neo.* 'Groves Cotton Candy', no one seems to know what the answer / difference is at our meeting as we didn't have the later to compare them. Growing close together in John's shade house *Neo.* 'Pink Fairy Floss' and *Neo.* 'Pink Sensation' look very much like the same plant. For John *Neo.* 'Pink Fairy Floss' is more difficult to grow and John finds *Neo.* 'Pink Sensation' is a larger plant. Under John's growing conditions *Neo.* 'Sexy Pink' is more robust than *Neo.* 'Pink Fairy Floss' and or *Neo.* 'Pink Sensation'. Three very attractive eye catching plants well worth growing in anybody's collection.

Fertilising these pink *Neoregelias* seems to be the key to success in gaining good vibrant colour, but be careful not to get their labels mixed up.



Neoregelia
'Pink Fairy Floss'

Neoregelia
'Pink Sensation'

Neoregelia
'Sexy Pink'

Marie brought along two plants for discussion wanting to know if they were the same or at least if they are related, *Neoregelia* 'Satsuma' and 'Satsuma Gem'. *Neoregelia* 'Satsuma' was imported into Australia under formula in 1986 as *Neo.* (*ampulacea* x *paucifolia*) x (*princeps* x 'Fireball') from Hendrix in the USA. In 2009 Ross noticed his *Neo.* 'Satsuma' produced a vegetative sport with central pink/plum stripes on purplish leaves at PineGrove Nursery. This sport was stabilized and registered on the BCR as *Neoregelia* 'Satsuma Gem' in 2013.



Neoregelia 'Satsuma' and its variegated sport *Neoregelia* 'Satsuma Gem'

What Are These Swimming in My Neoregelia?

Found swimming around in the well of a *Neoregelia* staying on the surface, they have a round hard shell, to the naked eye they don't appear to have any visible moving parts. There appears to be no damage to the plant.

Paul Turvey's response to this facebook query: "They're probably ostracods - small crustaceans sometimes known as "seed shrimps". You can confirm it if you check one under a magnifying glass. They have a clam-like shell that is flattened underneath, with a slot opening underneath that their short little legs poke out of when they are scuttling around. So, if that's what they look like, then ostracods are what you've got. Try googling "bromeliad ostracod" and you should get some pics.

The ostracods in the genus *Elpidium* actually specialise in living in Bromeliad tanks. They often go unnoticed, but once you start seeing them, you'll probably find lots of them. I certainly have lots of them in lots of Bromeliads - probably through most of my collection. They scavenge around and help to keep the Bromeliad tanks clean, so they're good guys to have".



Tillandsia 'Laurie'



Tillandsia 'Emerald Forest'



Tillandsia brachycaulos



Tillandsia 'Pheonix'



Tillandsia 'Nezley'



Tillandsia remota



Tillandsia minutiflora





Tillandsia 'Samantha'
equal 1st Open John Crawford



Tillandsia ionantha
1st Novice Coral McAteer



Tillandsia brachycaulos
grown by Gary McAteer



Vriesea 'Black Beauty'
equal 1st Open Marie Essery



Vriesea saundersii
grown by Kay Daniels



'Just Hangin' Around'
1st Decorative and Judges Choice John Crawford



Tillandsia 'Bob's Amigo'
grown by John Crawford



Cryptanthus 'Red Eye Gravy'
grown by Les Higgins

'Glutinosa' - Lost But Not Forgotten compiled by Ross Little 2018

In 2017 a question was asked about *Aechmea glutinosa* "is it still being grown in Australia?" This is important as the last photos taken of this plant when a web search was done were from 20 years ago by Peter Franklin. On checking the Pinegrove Ledger we found BBK #691 *Ae. glutinosa*, 1983 and also a U.S. import from Seaborn in 1987, did we know if it was still being grown? Yes it is still here at PineGrove in abundance as we also still have growing in our gardens plants acquired from Peter Franklin in the late 1990s. That is the importance, it is still in cultivation. Next issue is how to treat it regards naming as *Ae. glutinosa* it is not accepted under I.C.N Rules, therefore it must be recorded under I.C.N.C.P Rules and be placed in the BCR as *Aechmea* 'Glutinosa'.



Aechmea
'Glutinosa'
photo Ross Little

Aechmea 'Glutinosa' revisited by Derek Butcher Feb 2018

For several years now I have corresponded with Mike Wisnev in California and Mike is one who loves wandering around Huntington Botanical Gardens, checking on labels. He did great work with *Hechtia* and *Puya* encouraging specialist botanists to visit and comment on his findings. In between these discussions he looked at the not so prickly types and many were hybrids with little data held in the Huntington files. One such problem cropped up in August 2017 when I got sent a photo of *Aechmea distichantha* x *phanerophlebia*. This had never been recorded nor given a Cultivar name. *Aechmea distichantha* is a bag of worms that Peter Franklin and I tried to solve years ago. We ended up with a bag load of notes but no action was taken. One plant which we kept separate was called *Ae. glutinosa* and now is the time to see what Peter reported.

A Summary of: **Exactly What is *Aechmea glutinosa*?** by Peter Franklin
For Peter's article in full refer: Bromeleter 37(1), 6-8, 1999.

Peter acquired this plant in the late 1980s but unfortunately could not find reference to it anywhere in any written literature available at the time. A few years later it was noticed another acquisition labelled as *Quesnelia* sp? 'OF' looked very similar to his *Aechmea glutinosa*. Eventually both plants flowered confirming they were the same. But what ??

Using his Smith and Downs Monograph Peter tried to key out his *Ae. glutinosa* ending up at *Ae. distichantha*. It wasn't an exact match to the description for *Ae. distichantha* species or any of its varieties or forms.



Aechmea glutinosa doesn't match any *Ae. distichantha* grown in collections in Australia either. As time passed Peter kept searching and comparing his mystery plant with descriptions that indicated similarities to his plant e.g. *Ae. wittmackiana* and *Ae. jucunda* a synonym of *Ae. wittmackiana*. Close but not quite.

Peter: "The main differences among all the photos, the descriptions and the cultivated *Ae. glutinosa* are in the width of the leaves, the thickness of the scape, the relative length of leaf versus scape and the extent to which the plant is stoloniferous. The floral parts are essentially all the same.

However, as with most naming exercises, I ended up with as many issues, anomalies and problems as I started out with. But at least I am reasonably satisfied that *Ae. glutinosa* (and *Quesnelia* sp? O.F.) has, at last, a place in the spectrum of *Aechmea* species as *Ae. wittmackiana*".

Plants grown in Australia as *Ques. wittmackiana* proved to be *Ae. Wittmackiana* and are not a match to Peter's *Ae. glutinosa* or *Ae. glutinosa* imported by Pinegrove from the US in 1987. There has also been inferences of our *Ae. glutinosa* possibly being of hybrid origin which are unfounded at this stage. Because we know that 'Glutinosa' is growing in Australia it needs to be registered in the BCR.

Registering 'Glutinosa' we would say it is strongly related to *Ae. distichantha*, origin unknown but probably found in the wild. See Kent's Nursery (California) Catalogue 1979 where it is listed as *Aechmea glutinosa* species. The plant grows to about 50cm high with leaves 45cm long x 90mm wide. Peduncle to 70cm long x 9mm thick. The fertile part of the inflorescence is 12cm long x 45mm diameter.



Quesnelia wittmackiana on the left distinguished by its distichous terminal tip.



Ae. distichantha Franklin

Aechmea distichantha on the right distinguished by its cylindrical terminal tip.

Tillandsia brachycaulos in Costa Rica - Sights to Remember

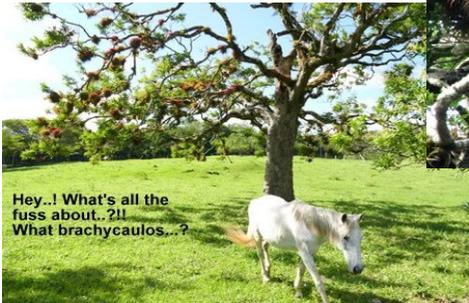
So here we were on a journey to Monteverde up in the mountains, to experience the Cloud Forest. On the way we were enjoying a wonderful drive around Lake Arenal via a compulsory stop at the German Bakery ...double yum... the best apfelstrudel and a chance to chat with a real German...(Shepherd) who was SO... excited to hear about all the Tillandsias I had seen...!

That was a highlight I can tell you - you should try travelling/getting lost with Ross for a five weeks...!! Further down the road I saw a church that I became engrossed in photographing. It was lucky we had stopped... because in a nearby field was a tree "glowing red", just dripping with *Tillandsia brachycaulos* of every shade of orange through to red...



What a stunning sight
...aah...
so many *brachycaulos*...

So taken for granted...



Hey...! What's all the fuss about...?!
What *brachycaulos*...?

Our four legged friend just couldn't understand all the excitement...!

There are times when you think that your journey could not get any better...

It did the very next morning when the clouds cleared...



Volcan Arenal appeared out the mist...

Could it get any better than this....???

by Lesley Baylis

Fungi - Part 2

by Les Higgins 2018

Pathogens attack cultivated plants that are in an unsuitable location or have injury or poor husbandry. Plants whose hydrocarbon cuticle has been dissolved by E.C. pesticides are among those most susceptible to pathogens.

Trouble shooting includes:

- Is the plant overcrowded?
- Is the air movement limited?
- Is the plant constantly damp or over wet?
- What is the temperature?
- Are animal manures included in the substrate?
- Is the plant in a mixed collection? – particularly among orchids that have black spots.
- Finally is this a plant in a wrong type of environment?

The most serious pathogens of Bromeliads are:

- *Colletotrichum*
- *Fusarium*
- *Phytophthora*
- *Pythium*.

They are the causal agents of Black spot, Collar rot, Crown rot, Damping-off, Root rot and wilt.

Colletotrichum causes anthracnose, seen as blackened and often sunken areas. A *Colletotrichum* spore is sticky. *Colletotrichum* doesn't need a wound to gain entry into the plant. Spores as they germinate produce an organ known as an *appressoria* that penetrates the leaf surface. Irrigation and rainfall are the major dispersal agents for a *Colletotrichum* spore. Copper is a commonly used control for *Colletotrichum* but it also kills Bromeliads.

Fusarium is spread by irrigation water. It becomes most prolific in warm, high humidity. Symptoms are water logging starting at the basal stem. *Fusarium* clogs the plants sieve tubes preventing water movement. There is no cure. Plants may be saved by **immediately** cutting out the affected part well beyond the visible damage. Survival chance increases by keeping the wound as dry as possible.

Pythium and *Phytophthora* are causative agents of root rots.

To avoid both *Phytophthora* and *Pythium* consider:

- Is the seedling mix/potting mix too damp?
- Are plants watered late in the afternoon?

- Cold nights with wet feet are no good for man or plant!
- If you must water plants in the evening do it during the warmer months, November to March.

To combat disease it is essential to change the plants environment. For CAM plants use evening fogging or misting rather than sprinklers. If all else fails select a fungicide that will stimulate plant growth.

Yates Anti Rot™ is systemic and has growth stimulant ability. The **A.I.** 200g/L phosphorous acid can be found in other commercial products.

Mancozeb™ is a home garden product sold in small packages.

Previcure™ is a growth suppressant for cymbidium orchids. **Benlate™** stops bromeliad growth. Combined they stimulate growth of cactus and succulents.

Radomil™ (Fongorid™) is a food for micro-organism. It accelerates potting mix degradation while stimulating plant growth. Spraying the seedling mix protects against *Pythium* and *Phytophthora* but is ineffective against *Rhizoctonia*. Radomil is used in the pineapple industry, it builds up micro-organisms within the soil that prevent *Phytophthora* becoming re-established. Like all living things the micro-organisms need regular feeding to maintain the numbers that provide protection.

FNCBSG members use cinnamon as a fungistat. Two culinary types are available with powdered *Cinnamomum cassia* the preferred species. Sulphur could be used in lieu of cinnamon with a secondary benefit as a miticide.

Once upon a time (A Fairy Story?) there were fungicides based upon metals. The initial letter of the fungicide indicates the metal. They could suppress fungus, stimulate a specific plant or when wrongly used kill the plant. How many are still available is unknown to the writer.

Ferrous (iron) such as the fungicide Ferban™ (no longer registered in N.S.W) is a plant stimulant. Ferban makes a dramatic and immediate improvement in bromeliads. It was despised for leaving rusty looking marks that persisted for weeks. (After expiry of N.S.W registration African violet growers imported it from America).

Copper or zinc (Zineb™) fungicides damage bromeliads. Both metals are essential micro-nutrients. For Bromeliads a miniscule amount of copper is all that is needed. Zinc about double the copper amount. Commercial Trace Element Mixes can contain, for Bromeliads, excessive quantities of both elements.

Copper will annihilate slime mould on brick or concrete floors. Copper oxychloride is best but six times more expensive than Copper sulphate. As a bonus copper kills earth worms and deters other pests of shade house floors.

Note: earth worms are valuable in your garden of course!

Fungicides and antibiotics potentially harm good friends. They are unnecessary in the coastal regions of Far North Coast of N.S.W and Queensland.

Fungal Rust has the potential to become extremely destructive.

Wheat Rust has for centuries been a serious agricultural problem. Red haired dogs were once sacrificed in the hope of stopping the disease. Spores have been found at an altitude of 20,000 feet floating on air currents from the U.S.A. to Canada. Rust constantly mutates and has the potential to destroy entire crops.

Fuchsia Rust is a Japanese native. In the 1970's it appeared in West Ryde, Sydney. (a smuggled piece of plant ?). Within weeks *fuchsias* throughout Australia were dying. Many of the more delicate species of *fuchsia* were wiped out. One expensive fungicide gave partial relief. Perhaps fungicide remains a cost to *Fuchsia* growers.

Tillandsia Rust arrived in NSW on imports from South America. Regardless of malevolent opposition by the importers all plants with the disease are promptly incinerated. **This action protects our collections.** If a Bromeliad Rust becomes established in Australia it is unlikely that there is a chemical to satisfactorily combat it.

There is now a new danger, not a fungus but *Xylella* bacteria. To the chagrin of Very Vocal Money Grubbers all overseas trade in Bromeliads is suspended. Plant growers who have the impression that the suspension is wrong should consider this: **To enable a few persons to make money are we prepared to risk the destruction of our plants and the unending cost of chemicals to combat *Xylella*?**

Refer FNCBSG Newsletter December 2013 p.12 for:

E.C: Emulsifier concentrate

A.I: Active ingredient

Where do I Find the Dates ?

www.bromeliad.org.au then click "Diary".

Check this site for regular updates of times, dates and addresses of meetings and shows in your area and around the country.

Novice Popular Vote

1st	Coral McAteer	<i>Tillandsia ionantha</i>
2nd	Gary McAteer	<i>Tillandsia brachycaulos</i>
3rd	-----	-----

Open Popular Vote

1st	Marie Essery	<i>Vriesea</i> 'Black Beauty'
1st	John Crawford	<i>Tillandsia</i> 'Samantha'
2nd	Kay Daniels	<i>Vriesea saundersii</i>
3rd	Les Higgins	<i>Cryptanthus</i> 'Red Eye Gravy'

Judges Choice

1st	John Crawford	<i>Tillandsia</i> 'Samantha'
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Decorative

1st	John Crawford	'Just Hangin' Around'
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Comments from the Growers:

John's *Tillandsia* 'Samantha' is a beautifully grown specimen that enjoys bright indirect light in a warm humid environment. *Tillandsia* 'Samantha' was made by Pamela Koide-Hyatt in 1989 with seed harvest in 1991, it took Pam over 10years to grow these progeny to flowering size. "Of the plants Pam bloomed, several showed some pink in the foliage, but that depends on controlling the feeding and providing sufficient light. The spikes hold colour for a long time, more than six months. The flower petals are pale yellow."

Tillandsia 'Samantha' was nominated as a finalist for 'Plant of the Year' at the 2012 RHS Chelsea Flower Show. In January 2013, *Tillandsia* 'Samantha' won the Glass Tulip Award 2013 in the Netherlands for the Best New House Plant release in 2012, conducted by FloraHolland.

Definitely a special plant worthy of being in ones collection.

Only one entry in the Decorative Section this month and that was *Tillandsia* 'Leiboldiana Pendant'. It represented what is desired as Decorative having: flow, symmetry and harmony in a small artistic container.

The plant was more perfect than all others on show. As it had been decided to suspend show rules this plant could be given its rightful recognition: Judges Choice. Without a doubt this is the best Decorative display that has been seen for a long time.