

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

Study Group meets the third Thursday of each month

Next meeting June 16th 2016 at 11 a.m.

Venue: PineGrove Bromeliad Nursery

114 Pine Street Wardell 2477

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Discussion: May 2016

General Discussion

Editorial Team:

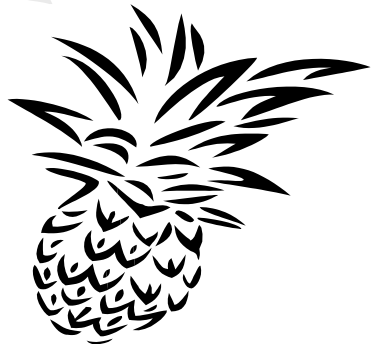
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Meeting 21st April 2016

The meeting was opened at approximately 11.00 am
The 15 members and one visitor present were welcomed.
A total of nine apologies were received.

General Business

Ross commented that the Tillandsia Day held on the 17th April at Newmarket State School, Newmarket was a very worthwhile way to spend a Sunday. The event was well attended with many Tillandsias finding new homes. This is one event not to be missed in the future if you wish to add a few rarer or not often seen Tillandsias to your collection. A collectors dream event.

The Group was advised of a segment to be aired on ABC's Gardening Australia programme featuring Vic Przetocki from Western Australia who has a extensive collection of Bromeliads. Vic has 401 registered hybrids to date accredited to his name that he has created, quite an achievement.

Ross mentioned the earthquake in Ecuador expressing his sympathy for the people involved as he had travelled throughout Ecuador in 2015 and always felt very safe there. The people were always very friendly and helpful where his travels took him in his time there.

The Woodburn Orchid and Foliage Show is being held on 7th and 8th May for those interested, this is always an excellent show with many plants being offered for sale including Bromeliads of course.

Show, Tell and Ask!

There was a question about taking pups off all year round. Some growers say this is all right as long as they are not kept too wet in winter, at least until they're established. Pups removed during these cooler months of the year tend to take longer to establish roots and unfortunately sometimes tend to flower prematurely in the spring. Thoughts to consider are where you live and your own environment, your individual set-up e.g. heated house or even just a plastic covered house / area as these will help create the necessary microclimate required.

A discussion was had in regards to fertilising Bromeliads the year round. As many of our Bromeliads flower at different times of the year, yes it is appropriate to fertilise year round. Also when the flowers are finished the plants begin the pupping stage, so to encourage good strong vigorous growth the Bromeliads require need a good source of food, therefore fertilising year round is essential.

In the FNCBSG NSW Newsletter November 2015 p.5 we published (in part) the following notes regarding *Hohenbergia leopoldo-horstii* : "Who was 'dad' ? Ross has a group of *Hoh. leopoldo-horstii* grown from imported seed which is showing a great deal of variation in the plants. Hopefully they will flower in the near future so that differences in the flower spikes can be looked at and checked against the written description."

Since that discussion some of the Hohenbergia shown by Ross in 2015 have flowered, differences with one of them is quite obvious. Most of this seed batch had plants with similar foliage but slight differences except two which are markedly different. These two have greenish, broader leaves than the others, one of these has flowered having white / yellow petals distinctly different to the others with their blue petals in pinecone type clusters. Now that we have flowering plants we could investigate further and start asking questions, the first person to ask was the source of the seedlings: Derek Butcher who had acquired the seed from his mate Oscar in Brazil. Derek's response "My solution is that Oscar had collected more than one seed berry or much more rarely with the same berry every ovule needs one bit of sperm (pollen) and sometimes you can have more than one father! Mind you as every good hybridist should, you should select the best and destroy the rest or take the easy way out and call them off. *leopoldo-horstii*." Oscar has since supported this response with the seed being collected from within his nursery which he says "explains the variability of the seedlings." This is why one should always assess the results of seed growing programs, especially when seed is sourced from other people/sources rather than from ones own plants. In this case it was thought the seed was wild collected but alas it was the plants that had been wild collected not the seed. (photos p.5)

Ross also showed a *Tillandsia rubella* which measured 2.66 metres long from the tip of the inflorescence to the end of the stolon as it is at present, it has had at least a half metre cut off it over the years. He purchased it in circa. 1997 from Peter Tristram. As it grew taller it kept falling over so he threw it under some trees in the garden where it grew well for several years. Eventually it was placed back in the shade house where it finally flowered. Nothing like a move / change of environment to encourage a stubborn plant to flower. (photo p.9)

Laurie showed a *Tillandsia* 'Houston' which flowered after a grasshopper had eaten most of the foliage. It's a good job some Tillandsias never give up !

Keryn's plant was identified as *Aechmea* 'Pie in the Sky'. (◀ photos p.9 ▼)

John's plant was identified as a *Tillandsia flabellata* hybrid possibly *Till.* 'Roma'.

Debbie gave a very informative talk on Legionnaires Disease. (notes p.14 -15)

Sunny Broms

On the Sunshine Coast

31st March - 2nd April 2017

19th Australasian Bromeliad Conference

e-mail: sunnybroms@icloud.com

Sunnybroms on the Sunshine Coast:

The 19th Australasian Bromeliad Conference, hosted by the Sunshine Coast Bromeliad Society Inc. in Caloundra, Queensland, Australia. 31 March to 2 April 2017.

April is a great time to visit South East Queensland. Beautiful one day, perfect the next.

The only thing to make it better is a Bromeliad Conference

Why not come and experience our warm hospitality while visiting some of our really great gardens and nurseries?

- Wide range of genera
- Rare and exotic plants
- A collector's delight
- World class presenters
- Interesting Topics
- Keynote speaker — Chester Skotak

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Hohenbergia leopoldo-horstii ex Oscar / Derek showing differences.



A group of *Hohenbergia leopoldo-horstii* grown from imported seed from Derek Butcher's mate Oscar showing a great deal of variation. Growing in 200mm pots. (photo from FNCBSG NSW Newsletter Nov. 2015)

**Nidularium innocentii – variegated forms enter the:
Bromeliad Cultivar Register** by D. Butcher May 2016

Only *Nidularium innocentii* is accepted in the World Checklist of selected Plant families whereas Leme in *Nidularium* - Bromeliads of the Atlantic Forest pages 144 -153, 2000 included two variegates: var. *lineatum* and var. *striatum*.

I quote from the book:

“The variety *lineatum* differs from the other varieties in its variegated leaves with white or yellowish lines. This trait is seen occasionally in the wild, as in specimen Leme 23-B, but it apparently reproduces only vegetatively, not sexually. Although this case is an exception to the method used here, I decided to maintain the validity of this variety due to its huge popularity as an ornamental and to the fact that it is already widely cultivated and has been for almost 90 years.

LEAVES green with longitudinal white or yellowish lines, 1 - 3 mm wide”.



Description from Smith & Downs (1979):
Leaf-blades green with numerous longitudinal white lines.
Primary bracts red near the apex and green elsewhere.

“The decision to maintain variety *striatum* as a valid taxon took into consideration the same arguments presented in relation to the previous variety. In this case, variety *striatum* has been cultivated for over 100 years and is one of the most popular taxa of this genus”.

LEAVES green with white to yellow longitudinal stripes wider than 5 mm”.



Description from Smith & Downs (1979):
Leaves, or at least their blades, green. Blades marked with longitudinal white lines.
Primary bracts wholly or mostly red-purple.

Clearly Leme was uncomfortable in treating them under the ICN – International Code of Nomenclature (at that time ICBN – International Code of Botanical Nomenclature) rules and yet they would have been comfortable if named under the ICNCP (– International Code of Nomenclature of Cultivated Plants) rules. Here we have a dilemma. The ICNCP rules covering cultivated plants have been with us since 1953 but as far as I can trace are not acknowledged in the ICN rules BUT the ICN rules are acknowledged in the ICNCP rules. You would think that by now, botanists would accept that the ICN rules do not stand alone and that all naming must be linked to this code whether the plant originates in the wild or cultivation. We do know that this was Linnaeus’s intention long ago. A recent example under Synonymies in *Ananas* by Coppens d’Eeckenbrugge and Govaerts, in *Phytotaxa* 239(3): 273-279. 2015 shows referral to both cultivated and wild plants and yet all are named as under the ICN system.

In a similar scenario we are seeing varietal status disappearing for variations in colour of petals. Here again botanists should not be shy in that the ICNCP can cover such differences quite adequately.

Such is the reluctance to concede that there is such a thing as the ICNCP rules the only reference list on the internet acknowledging this is the New Bromeliad Taxon list <http://botu07.bio.uu.nl/bcg/taxonList.php>

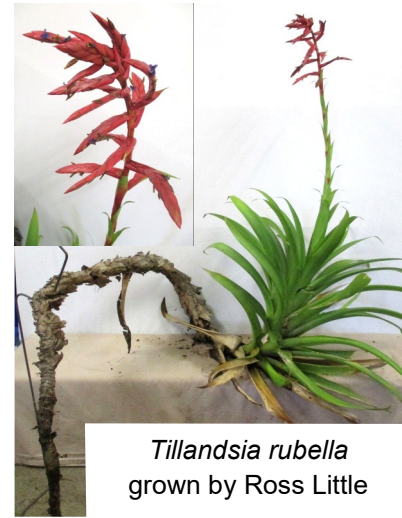
Therefore, I am adding the names *Nidularium* ‘Lineatum’ and *Nidularium* ‘Striatum’ to the Bromeliad Cultivar Register.



Vriesea 'Forrest'
1st Open John Crawford



Neoregelia 'Tiger Head'
1st Novice Keryn Simpson



Tillandsia rubella
grown by Ross Little



Tillandsia flabellata hybrid possibly 'Roma'
grown by John Crawford



Tillandsia fasciculata 'Purple'
1st Decorative and Judges Choice
John Crawford



Guzmania hybrid
grown by Kay Daniels



Aechmea 'Pie in the Sky'
grown by Keryn Simpson



'What A Dish'
Helen Clewett



'Cup Runneth Over'
Jeanette Henwood



'Not Forgotten'
Laurie Mountford



Neoregelia 'Bill Morris'
grown by Dave Boudier
Photos by: Ross Little



Tillandsia uncispica
grown by Laurie Mountford

Aechmea 'Roehrs'

by Derek Butcher, March 2016

We first heard about this variegate in The Bromeliad Bulletin, Vol. 3, No. 5, 1953, page 39 by Alfred S. Graf "Another very elegant variegated bromeliad is an Aechmea, which came to us under the name of Aechmea Coelestis Albo Marginata, a slender type of plant growing to 1 ½ to 2 feet. The grey-green leaves are of hard and shiny texture, overlaid with silver scales. Along the edges runs a broad white margin which by its clear contrast gives a striking effect. We have not had this plant in flower, so do not yet know its true identity. It may quite possibly be a sport of *Aechmea coelestis* or of *Aechmea caudata*. It shows great promise because it is a very durable, leathery plant and should be ideal as a house plant and in combination plantings."



Four years later Mulford Foster published the name as follows:

Aechmea coelestis var. *albo-marginatus* M. B. Foster var. nov. Bromel. Soc. Bull. 7: 91, fig. 1957. A var. *coelestis* foliis albo marginatus longitudinaliter striatis differt. M. B. Foster No. 3016 (Type in the U. S. Nat'l Herb.)

"This lovely variegated form of *Aechmea coelestis* has a charm and reserve that few variegated plants have. The rather wide white stripe that edges the margins of the grey-green leaves of this plant make it a really conservative but elegant plant. We have had this plant in cultivation for at least five years. It was received from Europe where it apparently originated, but we have never learned who first saw this variegated form. It has been grown by the Julius Roehrs Co. of Rutherford, N. J. In the Bromeliad Bulletin, Vol. 3, No. 5, 1953, page 39, there was a photo of this plant shown in connection with an article by Mr. Alfred S. Graf who stated at that time that they had not seen the plant in flower so did not know its true identity.

This new variety has flowered on several occasions in the Bromelario at Orlando; therefore, it can now be ascertained that it is a variety of *Aechmea coelestis*.

While the inflorescence is not showy the plant is at all times a modestly showy one. The flowers are of a very light caerulean blue; the fruit when ripe becomes rather grey-magenta in color. The marginal bands are quite regular and consistent and are not variable as in so many other variegated plants. The average height of this plant when in flower is eighteen to twenty-four inches."

Then in Smith & Downs Bromelioideae Monograph (1979) *Aechmea coelestis* var. *albo-marginata* M. B. Foster, Bromel. Soc. Bull. 7: 91, fig. 1957.

Leaves: white-striped especially along the margins.

Type: *M. B. Foster* 3016 (holotype, US), cultivated of unknown origin.

Distribution: unknown.

Current interpretation is that it should be treated as a cultivar. This is confirmed in The World Checklist of Selected Plant Families. As such this Culton will now appear in the Bromeliad Cultivar Register as:

Aechmea 'Roehrs'



Aechmea 'Makoyana'

by Derek Butcher, March 2016

We see the following in Smith & Downs (1979) and it is noted that this variegation occurred in cultivation.

"*Aechmea comata* var. *makoyana* (Mez) L. B. Smith, Smithson. Misc. Collect. 126: 14, 221. 1955;

Aechmea makoyana Hort. Makoy ex Rev. Hort. 65: 203.1893, nomen.

Hoplophytum lineatum hortus ex Gard. Chron. for 1893(1): 414. 1893.

Type. *Bull Hortus* 4223 (K ? n v).

?*Lamprococcus speciosus* hort. Bull ex. Gard. Chron. for 1893(1): 414. 1893. Type. *Bull Hortus* 4222 (? n v).

Aechmea lindenii forma "*Hoplophytum makoyanum*" hortus ex Mez, DC. Monogr. Phan. 9: 265. 1896.

? *Billbergia forgetiana* Sander Hortus in Gard. Chron. 258, fig.102 on p.266. 1903.

Aechmea lindenii var. *makoyana* Mez, Pflanzenreich IV. 32: 159. 1934.

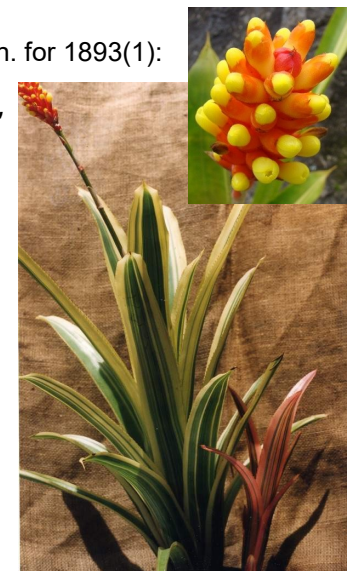
Leaf blades: yellow-striped .

Type: described from cultivation. n v.

Distribution: unknown."

Current interpretation is that it should be treated as a cultivar. This is confirmed in The World Checklist of Selected Plant Families. As such this Culton will appear in the Bromeliad Cultivar Register as:

Aechmea 'Makoyana'



Note the pup's orange foliage when in its juvenile stage.

Cryptanthus arelii, 'It' and 'Ti'

by Les Higgins 2016

Volume XIV, No.2, Summer 1999 issue of the *Cryptanthus* Society Journal published:

Cryptanthus arelii H. Luther, sp. nov.

TYPE: Brazil. Bahia, 5 km south of Palmeiras on Highway 24, terrestrial under bushes.

In 1948, a *Cryptanthus* was collected in the Monte de Burro range near Maracas, Bahia. This collection, except for having somewhat narrower, green leaves, appears to be conspecific with *Crypt. arelii*.

In 1964, *Crypt. arelii* produced a sport with a pink edged olive green leaf. First named as *Crypt. 'Minnie Belle'* and subsequently renamed 'It'. Extensively propagated, a reverse colour mutation occurred and named 'Ti' (reverse of 'It'). In Volume IV, No.1, Winter 1989 issue of the *Cryptanthus* Society Journal, the two mutations, *Cryptanthus* 'It' and *Cryptanthus* 'Ti' are described:

Cryptanthus 'It'. Mutation of a species.

Distinguishing characteristics: leaf olive green center with some translucent pink stripes, wide pink margins. In good light, pink coloration to center of plant shows an orange cast. (whatever good light may be!)

Cryptanthus 'Ti' mutation of *Cryptanthus* 'It'.

Distinguishing characteristics: margins of a leaf, deep olive green, center section of orange, rose, red to hot pink with some darker olive stripes. Centre section somewhat translucent. Leaves glabrous on surface except close to centre of the plant, which shows somewhat frosted bands. Underside of leaves densely fused with scales with variegation showing through.

In Australia 'It' and 'Ti' are usually a cream colour. A technique to successfully produce the described colour is diffused moderate light with both water and substrate about pH5

'Ti' has so few chloroplasts (green area) photosynthesis is limited. With low / no carbohydrate store 'Ti' is prone to die in cold weather. Foliar feeding can build carbohydrate by using Nitrate as the nitrogen supply (potassium nitrate or calcium nitrate) and include molasses and Epsom salt. Urea and Ammonium will kill 'Ti' and 'It' with reduced photosynthesis area becomes debilitated. As winter approaches a foliar spray of Potassium phosphate is beneficial.



Cryptanthus

◀ 'It'

'Ti' ▶



Aechmea 'Pie in the Sky' by Peter Franklin in Bromeleter 37(5):10. 1999

It may seem repetitious since Derek Butcher wrote a similar article to this in January/February 1996 but it seems there is still sufficient confusion in Australian growing circles to warrant another 'Pie in the Sky' article.

Aechmea 'Pie in the Sky' is a name that has been coined to identify a variegated plant that is commonly grown as *Aechmea pimentii-velosoi variegata*. The name *Ae. pimentii-velosoi variegata* is in widespread use around Australasia. I suspect this name is used world-wide. The reason that a new name was needed was that the plant has very little in common with any description or botanical drawing of the real *Ae. pimentii-velosoi*.

Aechmea pimentii-velosoi was first described by Raulino Reitz in 1952 from a plant collected in 1951 in the State of Santa Catarina, Brazil. This type plant was supported by another three collections later in 1951 and then by a further two. They were eventually named *Ae. pimentii-velosoi* var. *glabra*. The plants were placed in subgenus *Ortgiesia* in Smith's 1979 monograph. This is the subgenus that includes *Ae. recurvata*, *Ae. gamosepala*, *Ae. caudata* etc.

I have been able to find only three illustration of *Ae. pimentii-velosoi* in the literature. A colour drawing is in Reitz (1983). Another is a line drawing in Smith and Downs (1979) which seems to have been a copy of the painting in Reitz. Descriptions appear in both these publications. Baensch (1994) has a photograph of an *Ae. pimentii-velosoi* var. *glabra* (but in reality this seems to be a non-variegated 'Pie in the Sky'). There have been mentions of *Ae. pimentii-velosoi* from time to time in the BSI Journal but no description or illustration has ever been included.

The distinguishing feature of *Ae. pimentii-velosoi*, as compared with 'Pie in the Sky' is the scape that is 'wholly covered by the leaf sheaths'. This is the characteristic that is used in Smith's key to *Ortgiesia* and is evident in the illustrations of Reitz and Smith. Therefore, the real *Ae. pimentii-velosoi* looks rather like a slightly larger *Ae. recurvata* var. *benrathii* in terms of overall plant shape and conformance: with the flowering part pushed down in the throat of the plant. The leaves are relatively narrow. The petals are pale yellow with a reddish-violet tip.

On the other hand, *Ae. 'Pie in the Sky'* in cultivation has a scape that greatly exceeds not only the leaf sheaths but also the leaf blades. The leaves are relatively broad. The petals are yellow with no extra colour at the tip. There is a strong similarity between *Ae. 'Pie in the Sky'* and *Ae. comata* except that 'Pie in the Sky' is about half the size of even the smallest cultivated *Ae. comata*.

I believe that there are plants of the real *Ae. pimentii-velosoi* in cultivation (in NSW at least), almost all of which are simply labelled *Aechmea* unknown, *Aechmea* ? or *Aechmea recurvata* hybrid? They match the drawings and descriptions of *Ae. pimentii-velosoi* perfectly. Unfortunately no one seems to know where these unnamed *Aechmeas* came from).

Ae. 'Pie in the Sky' is a nice little plant worthy of a spot in any collection. It may be a species or a hybrid - we may never know - but whatever the case, we shouldn't use the *Ae. pimentii-velosoi* name for it particularly when the real *Ae. pimentii-velosoi* exists in collections.

If All Else Fails, Read the Instructions by Debbie Smith 2016

As keen gardeners, we handle potting mixes every day, but do we know what's in them and the risks involved? Commercial potting mixes contain a variety of ingredients such as:

- peat (sphagnum)
- coir fibre (coconut)
- compost (mushroom)
- sand
- perlite
- vermiculite and/or worm castings
- zeolite
- sawdust, woodchips, bark
- polystyrene foam
- soil
- animal manures which frequently contain weed seeds and other contaminants. They need to be pasteurised to eliminate diseases.

All mixes should conform to Australian Standards.

How many of us have ever read the instructions for use? I googled lots of information, but when I actually looked at my bag of all-purpose potting mix, it was all there as follows:

Hazardous – compost, potting mixes and other organic gardening materials -

This product is made from organic materials including composted pine bark, and contains micro-organisms including bacteria, fungi and protozoa. May also contain minerals and fertilizer additives.

Risk – inhalation of dust and/or liquid mists may irritate, inflame or sensitize the nose, throat & lungs, resulting in illnesses ranging from hay fever to asthma, pneumonia (Legionnaires Disease) or pneumonia-like illnesses.

Direct contact may cause skin irritations (Dermatitis) and skin or eye infection or irritation.

People particularly at risk are those suffering from asthma or allergies and those whose immune systems are compromised.

Safety - avoid contact with eyes or skin. Avoid breathing liquid mists or dust. Wear suitable protective clothing and gloves (ASA) and a particulate mask. Wash hands thoroughly immediately after use. Wash work clothes regularly. Clean up by wet sweeping or vacuuming. Store in a cool place.

First Aid – irrigate eyes for 10 minutes with water. Wash skin with soap and water. Seek medical attention for persistent eye, skin or respiratory symptoms.

Health Warning -- garden soils contain micro-organisms which can be harmful to your health. Always wear gloves, keep damp when in use, avoid inhaling the mix and wash hands after use.

The most significant risk is that from the group of bacteria called Legionella, which can cause serious illness or death. Symptoms usually develop 2 – 10 days after exposure and may only last 3 - 4 days (flu-like), or may progress to Pneumonia. Symptoms include fever(high), chills, dry or moist cough, of breath, chest pain, aching muscles, headache, tiredness, decreased appetite, diarrhoea and vomiting. Legionnaire's Disease is simple to cure if treated promptly. People of any age may be affected but it is more common in middle and older aged people, and those with weakened immune systems. There is an increased risk for smokers and those with chronic health conditions such as Emphysema, Diabetes and Kidney Disease. The infection is not limited to gardeners but handling of soils and potting mixes puts them at increased risk. Note that the bacteria has also been found in trailer loads of soil, not just bagged mixes. Mortality is about 15%.

Transmission occurs by breathing in contaminated water vapour or dust. It is thought it may also be spread from hand to mouth. It is not spread from person to person or animal. It thrives in water and warm, damp places (spa baths, air conditioners, fountains, hot water systems).

SO, WHAT SHOULD WE DO FOR PREVENTION ?

Always use basic precautions:

- ensure you wash your hands thoroughly (don't forget your thumbs, fingertips, nails and between fingers) with soap and water after handling soils and potting mixes
- wear gloves (still need to wash hands after removing them)
- wear a mask
- keep the mix damp – a basic spray bottle will do
- handle in a well ventilated area .
- alcohol hand rubs/gels are not suitable in this setting and if used repeatedly without proper hand washing, residue left on skin can be flammable.

In conclusion, the risks and hazards of handling potting mixes are very real, but can be minimized considerably by using a commonsense approach as outlined above. Happy Gardening !

Novice Popular Vote

1st	Keryn Simpson	<i>Neoregelia</i> 'Tiger Head'
2nd	Dave Boudier	<i>Neoregelia</i> 'Bill Morris'

Open Popular Vote

1st	John Crawford	<i>Vriesea</i> 'Forrest'
2nd	Kay Daniels	<i>Guzmania</i> hybrid
2nd	Les Higgins	<i>Cryptanthus</i> 'It'

Judges Choice

1st	John Crawford	<i>Tillandsia fasciculata</i> 'purple'
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Decorative

1st	John Crawford	<i>Tillandsia fasciculata</i> 'purple'
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Comments from the Growers:

Keryn's *Neoregelia* 'Tiger Head' was acquired from the Gold Coast Society. Grown under trees but gets morning sun which helps maintain its good colour. For scale control Keryn uses 3 applications of an insecticide 2 weeks apart.

Dave also acquired his *Neoregelia* 'Bill Morris' from the Gold Coast, it is kept under shade. He feels it needs more light to improve colour and conformity.

John purchased his *Vriesea* 'Forrest' from Jennifer. He keeps it under 50% and 30% white shade cloth in Summer and takes down the 30% shade cloth in the Winter months.

Kay bought her *Guzmania* from the markets 3 years ago. She would be very interested to learn its name and is waiting to see if the flower opens up more.

Les bought his *Cryptanthus* 'It' in 2012, it is a mutant of the species '*arelii*'. He fertilises with osmocote when potting up and then uses a foliar fertiliser.

Laurie bought his *Tillandsia fasciculata uncispica* 3 to 4 years ago, this being its first flowering for him. It is kept outside in bright light only receiving rainwater.

John bought his *Tillandsia fasciculata* 'purple' from Bruce Dunstan, it is grown in scoria/stone only. Obviously enjoying its growing conditions. This is a pup from the original plant bought 3 years ago and this is the first flowering.

**A comment was made about the high standard of the decorative plants.
Well done everyone.**