

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

Study Group meets the third Thursday of each month
Next meeting 21st August 2014 at 11 a.m.

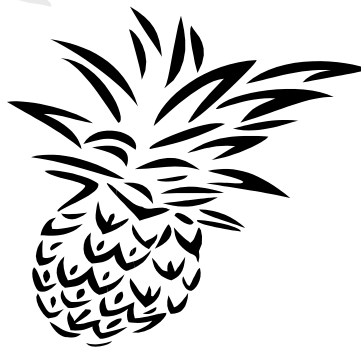
Venue: PineGrove Bromeliad Nursery
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Discussion: July 2014
General Discussion

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Meeting 19th June 2014

The meeting was opened at approximately 11:10am.
The 23 members and two visitors present were welcomed.
A total of six apologies were received.

General Business

A new book for our ever expanding Library, *Jewels of the Jungle, Bromeliaceae of Ecuador, Part 1* by Jose' M. Manzanares was presented to the Group.
The mail for the month was the BSI Journal also to be added to the Library.

The Group discussed the request from the Queensland Bromeliad Society for reciprocal exchange of newsletters which has been agreed upon.

Ron had a request for someone from the Group to supply a large number of *Neoregelia compacta* for one of his Op. Shop customers. Ron also reported on Denis Collis, a former member who has been suffering poor health, we extended our best wishes to Denis and his wife.

There was the ongoing discussion about labelling seed and seedlings correctly however one can only put on the label what is on the packet to begin with. It is when the plant is sufficiently grown, that you, the grower, check that the seedlings match the name on the packet. You need also; of course, to know your Genus and species to be able to correctly do this **OR seek** help from an experienced grower. I made this mistake of accepting the validity of the label only to find, after giving the plant away as a 12 month old seedling, a further 12 months later it was identified as not the nominated species at all, fortunately I had given it to Ross and my mistake was easily rectified and I have learned a valuable lesson. **Never trust the name on a label, especially seed.**

Meg's display of beautifully coloured Neoregelias from her shade house included many variations of 'Hot Gossip'/'Predator', the name depending on where you purchased the plant, many showing interesting changes in the patterning and colour on some of the pups. Meg also had several *Neo*. 'Garnish' and 'Groucho' that had been grown in different parts of her shade house with the changes in colour intensity due to differing amounts of sunlight.
One of Meg's Neoregelias had a 'novar' (no variegation) pup which had then grown a variegated pup, the same as the original mother plant.

Meg went on to describe the vertical garden that she and husband Errol had constructed from an old bed frame and seasoned timber covered with shade cloth and then planted with her very colourful Neoregelias, making a very pleasing and great display.

Ross displayed a flowering clump of *Vriesea* 'Carly', it has three inflorescences, one typical branched *Vr.* 'Carly' whilst the other two are simple, no branching. This in itself is not uncommon, however these two spikes don't even resemble the mother plant they are connected to as vegetative offsets. They could be considered a sport if they were worthy of being propagated further, as there are far better collectable *Vrieseas* in the market, these will go in the bin. (photo p.9)

Ross distributed the Newsletter, with John making the comment, "that was what he came for!" Herb Plevier has complimented us on the quality of our Newsletter and its balance of botanical, horticultural and human interest material this month. Great to know we continue to engender such enthusiasm.

Laurie commented that he was very pleased to have his *Vriesea* from the last meeting identified.

John Crawford said he had observed how many of his plants had flowered very quickly with the final arrival of winters chill.

The current Financial Report was on the table for those interested.

A general reminder for greater participation in the Novice and Decorative Sections of our monthly competition, we need some consistency in our competitions with as many of our members as possible supporting each section **please.**

As Les was the only competitor in the Novice Section this month with his *Cryptanthus* 'Ti' (a redder form), we gave him the floor to explain his method of growing *Cryptanthus*.

Les' method

Cryptanthus 'Ti' & 'Ti' (a redder form) seem to be low in chloroplasts. Both are temperature sensitive. Last October 'Ti' and 'Ti' (a redder form) were in a white skinned igloo in Queensland. Pups had strappy leaves, obviously low in carbohydrate and fed excessive urea and ammonium.

To facilitate maximum photosynthesis both were first placed under green/white shade cloth, Beige would have been more suitable. In autumn the red pigment had faded and both moved under red shade cloth. Finally both 'Ti' and the more redder form of 'Ti' are in full sun during the day and in the house at night.

During the nine months I have owned 'Ti' and 'Ti' (a redder form) foliar feeding has been applied to make carbohydrate within the plant. To do this I have used a 3 part nutrient mix with Calcium Nitrate+ Potassium Nitrate + Molasses.

The redder form of 'Ti' will almost certainly survive the winter but 'Ti' ????. The foliar fertilizer is now Magnesium Nitrate + Potassium Phosphate + Molasses. Use warm water to mix the chemicals.

Repotting starts in August to restore nutrient balance in the potting mix.

The season's foliar fertilizer is to be "Black Gold" alternating with Calcium Nitrate + Potassium Nitrate + Molasses, also Magnesium Nitrate and Iron Sulphate also supported by slow release nutrients in the potting mix.

The first three elements for Bromeliads is K.N.C. not N.P.K. The result of Calcium Nitrate + Potassium Nitrate combination is an ideal ratio of Potassium 38%. N+12 = Nitrogen 26.5%, Calcium 19% plus Molasses for carbohydrate and trace elements. Landmark sell 'Black Gold' for \$27.80/Litre

Pests: Mealy bug and ants controlled with Confidor and reinfestation prevented by Diatomaceous Earth in the potting mix. Every plant introduced to my place is examined, roots washed and bottom leaves removed then sprayed with Confidor before potting.

Watering: During warm weather high humidity is maintained around the plants without actually watering. Nutrient sprays & rain are sufficient.

Temperature: Night not less than 10°C

Buyer Beware: Les purchased two *Cryptanthus* 'Ti' from the same seller noting one appeared to be '**a redder form**' than the other. Now after 8 months in Les' care and growing conditions he can no longer see any difference between them. Moral here is just because you see a plant same as yours but differing in colour, doesn't mean it will be at your place. Same goes for size, plants can grow much larger and can get greater leaf stack (more leaf layers) the closer to the equator they are grown. So don't let size or colour fool you, size doesn't always matter !

Following Les' talk John asked about the molasses and the answer is molasses straight from the Sugar Mill. Molasses is also excellent for treating the soil for nematode infestation.

John also asked the Group for advice about Shade cloth, knitted or woven, the preferred quality to purchase and the benefits of the various colours and densities available. After much discussion and reflecting on the experiences of many in the Group it was recommended that you purchase the best quality available, the colour is dependent on what you are growing and position of your shade house in relation to the available sunlight both in summer and winter with the general recommendation that you use 50% shade cloth in most areas our Group covers and in Summer time you double up with a second layer for the very hottest months to prevent burning or bleaching.

Gary and Ross spoke of the visual problem algal growth can give with the lighter coloured shade cloths and to avoid this ongoing problem, choosing a deeper colour has its advantages.

It was also suggested that you be very aware of the potential damage that can occur to your shade house if there are bushfires or burning off occurring in your vicinity, the results can be very costly for you and your plants, particularly if they are suddenly left without cover in the midst of summer, together with the replacement costs of both plants and shade cloth with installation.

It was also recommended that you refer back to a previous article on the subject of what type and colour shade cloth to use if building a new structure or replacing old cloth. "What Shade Cloth to Use?" by Graeme Barclay from New Zealand, this article was reprinted in FNCBSG NSW Newsletter March 2011.

A timely reminder to everyone that it is necessary for each member to write their name only and sign the attendance book as well as paying your \$2.00 fee and not have someone else do it on your behalf or write your partners or a friends name in the book for them. (As they may have already done it, *Helen*).

Show and Tell

Ross introduced the group to *Aechmea brevicollis*, a very cute little Aechmea with leaves that turn at right angles halfway along their length, giving the plant a flat appearance enhanced by the brightest orange/red inflorescence. As it is a tropical species, Ross is hoping it will survive our winter and multiply.

Aechmea brassicoides is unusual, in that its central growth clumps together in a tight cone formation with the inflorescence breaking through the foliage to flower. It is also a tropical species from Guyana.

Shane, tested our Bromeliad recognition skills with many very interesting, lesser known Genera, by introducing names to us such as: **Ronnbergia** of which there are 13 species in the genus which was named after Auguste Ronnberg.

Androlepis was named by Adolphe Brongniart in 1870 who named it after the Greek *andro* (male) and *lepis* (scale) referring to the pair of scales on each stamen, there are now 2 recognised species in the genus. Shane also discussed **Racinaea** which has 75 species in the genus, **Wittrockia** has 7 and he also presented to the Group a nicely grown specimen of **Neoglaziovia** has 3 species in the genus which was named for Auguste Francois Marie Glaziou, a French landscape architect bromeliad collector, 1833-1906. Shane also mentioned quite a few other lesser heard of genera such as **Connellia**, **Cottendorfia**, **Brewcaria**, **Edmundoa**, **Pseudaechmea**, **Pseudananas**, **Glomeropitcairnia**, **Fosterella** and more.

Shane informs us that on checking the **Bromeliad Taxon List** at:

<http://botu07.bio.uu.nl/bcg/taxonList.php?> which is updated regularly, there are **3440** valid species and **56** valid genera at present.

Aechmea brassicoides by Harry E. Luther in J. Brom. Soc. 45(5), 1995.

Aechmea brassicoides was last noted in the JOURNAL more than 30 years ago (volume 13:57-58, 1963) as a species of the defunct genus *Gravisia*. Readers familiar with the name *Gravisia* probably also remember 25 cent cups of coffee !

Aechmea brassicoides was described by Baker in 1882. The type and all subsequent collections have been from the vicinity of Kaieteur Falls in Guyana. The plant is usually an epiphyte.

Apart from having a somewhat attractive inflorescence, this species presents a notable growth habit reflected in its specific name. The "Cabbage Bromeliad" produces, at maturity, a series of densely overlapping, often imbricated leaves that effectively create a seal over the centre of the rosette. The protected hollow formed may be advantageous in acquiring an ant colony. Many epiphytes in areas of poor soil form relationships with ants as part of their nutritional strategy. Ants bring all sorts of debris to their nest; this nutritious compost is usually rich in nitrogen and other minerals important for plant growth. Epiphytes with ants often grow more strongly than those without ants.



When *Aechmea brassicoides* comes into flower, the developing inflorescence punctures one or more of the overlapping, centre most leaves. This condition sometimes results in a plant with an inflorescence growing from one side of the rosette instead of straight from the centre.

Judges should take note !

Type. *Jenman* 957 (holotype, K; photo GH), Kaieteur Savanna, Potaro River, Guyana, Sep-Oct 1881

Distribution. Epiphytic in forest, 360-420 m alt, Guyana.

GUYANA. Kaieteur Savanna, 2 Sep 1937 *Sandwith* 1325 (K); Kaieteur Plateau near Falls, 6 Feb 1962. *Cowan & Soderstrom* 1779 (US).



Photos by: John Catlan ▲ ▲ and Ross Little ►

Collecting Bromeliads in British Guiana

Thomas R. Soderstrom BSI Journal 1963, Vol.13 (3)

Taken in part: the collecting of *Aechmea brassicoides*

The trip into the interior was fascinating. Minutes after take-off, our plane passed over Georgetown and the out skirting sugar and rice plantations. These abruptly give way to the seemingly endless canopy of rain forest trees — indeed, the same trees which inspired W. H. Hudson to write his famous book, *Green Mansions*. About 90 miles south of the coast, the flat topography of the rain forest gives way to occasional plateaus which rise to 1000 or more feet in height. Further south the entire land mass is elevated and forms the large Kaieteur Plateau. This plateau is part of the Pakaraima Series of sandstone ridges which extend from neighbouring Venezuela and Brazil into British Guiana. The Potaro River, on which Kaieteur Fall is situated, cuts through the plateau below the Fall to form the richly-vegetated walls of the Potaro River Gorge. No modern streamlined airport could offer so thrilling a setting as we encountered on landing. Our plane roared up the gorge and approached the waterfall from its face, circled overhead a few times for the view, and skidded with a splash into the water about a mile upriver.

Dr. Smith gave us special instructions to look out for a bromeliad with a spiny inflorescence, known only from the type collection on Kaieteur Plateau. The day after our arrival we found the spiny plant, rooted in the soil. We collected it with great care for it was the only one in flower. Later, however, we found it commonly as an epiphyte, in one instance densely clothing the branch of a tree high



above the forest canopy.

We were struck by the curious habit of the inner leaves which, in every instance, were folded tightly about each other cabbage-like. Through this tight head of leaves the flowering stalk literally breaks its way prior to blooming.

In allusion to its habit we dubbed it "Cabbage Bromel." Later we learned that this was the very species that Dr. Smith wanted and its botanical name is *Aechmea brassicoides*. Our common name was appropriate, for *brassicoides* means "like *Brassica*" (cabbage).



Alcantarea vinicolor
1st Open Marie Essery



Cryptanthus 'Ti'
1st Novice Les Higgins



Vriesea 'Pink Sensation' (unreg.)
Judges Choice Trish Kelly



Cryptanthus 'Rosebud'
1st Decorative Trish Kelly



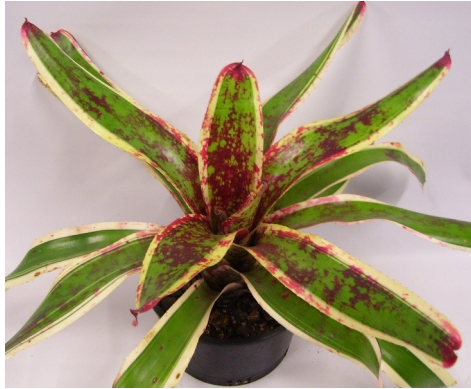
Vriesea 'Fairy Lace' (unreg.)
grown by Shane Weston



Neoregelia 'Predatress' & *Neoregelia* 'Predator'
grown by Meg Kerr



Neoregelia 'Predator'
showing unstable variegation



Neoregelia 'Garnish'
grown by Meg Kerr



Vriesea 'Carly' with different coloured
spikes on the one connected plant



Wittrockia cyathiformis
grown by Shane Weston

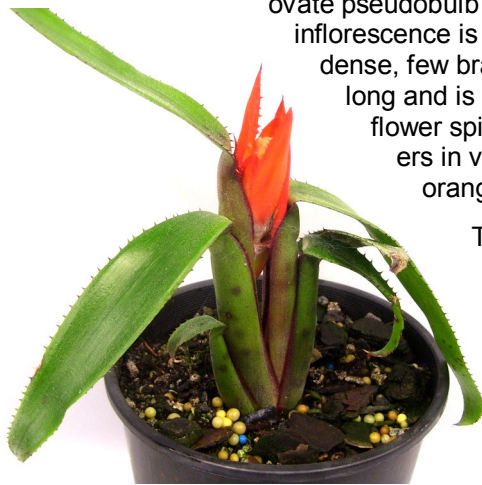


Tillandsia stricta
grown by Laurie Mountford

Photo's supplied by: Ross Little

Aechmea brevicollis L. B. Smith, 1945.

Aechmea brevicollis is an epiphytic species with a stoloniferous growth habit, meaning the new pups appear on long woody runners (stolons), these pups are easily detached and rooted (established). This species grows with a few greyish green leaves that bend sharply outward at the top, the sheaths of which form an ovate pseudobulb 13cm to 30cm long. The scape of the inflorescence is almost hidden by the foliage. The low, dense, few branched inflorescence is 4cm to 6.50cm long and is covered with wool-like scales. The flower spike bears from five to seven yellow flowers in vertical ranks hidden within the vibrant orange bracts.



Type: L. Williams 14267 (holotype, US), Maroa, Rio Guainia, Amazonas, Venezuela, 11 Feb 1942.

Distribution. Terrestrial or epiphytic in forest, 100-270 m alt, Amazonian and Orinocan Colombia, Venezuela and Brazil.

Wittrockia cyathiformis

(Vellozo) Leme, *Canistrum* – Bromeliads of the Atlantic Forest. 67-70. 1997.

Originally in our collections as *Canistrum cyathiforme* (Vellozo) Mez 1891 until Elton Leme revised the Nidularioide Complex in the 1990s when he placed it into its present position. *Wittrockia cyathiformis* grows epiphytically or as a terrestrial



in the Atlantic forests of southern Brazil at elevations of 800 to 2,000 metres. Broad light green leaves approximately 30cm long, mottled with dark spots, form an attractive open rosette. The inflorescence which is distinctly elevated from the rosette is made up of rigid reddish pink bracts. Among these bracts are fascicles of 5 to 7 flowers with golden yellow petals.

In Latin, *cyathus* refers to cup shaped organs, which means *Wittrockia cyathiformis* has a cup-shaped inflorescence.

Neoglaziovia variegata (Arruda da Camara) Mez, 1894.

Named to honour A. Glaziou, French collector and landscape architect, who was in charge of the public gardens in Rio de Janeiro in the late nineteenth century.

This monotypic genus is endemic to Brazil, where it is found growing in granite soil in the dry, hot caatinga region. It is a distinctive plant with narrow, round,



brownish green whip like leaves ranging in length from 60 cm to 1.52 mtrs. There are two forms, the leaf blades of *Neogl. variegata* var. *variegata* are glabrous above on the adaxial leaf surface and marked with broad, white cross bands beneath on the abaxial leaf surface. The leaf blades of var. *concolor* are densely white lepidote on both sides and not banded. The erect flower spike, about as tall as the foliage, is rich coral, the flowers are purple and turn darker as the plant

matures. Offshoots are produced on long stolons. This plant is best known for the fibre in the leaves which is used for weaving and for making rope; hence its value is more economic than ornamental, is seldom seen in collections.

Ronnbergia E. Morren & Andre, 1874

Named to honour A. Ronnberg, who was director of agriculture and horticulture in Belgium at the beginning of the nineteenth century.

This is a small genus of epiphytic and terrestrial bromeliads that grow in the



dense, damp forests of Costa Rica, Peru, Panama and southern Columbia at elevations ranging from almost sea level to 1981 metres. Ronnbergias are small to medium sized, stoloniferous plants with a few leaves that either form a rosette or have long conspicuous petioles (stalk or stem). The inflorescence is a simple spike with blue or white petaled flowers. This genus is not often seen in collections with only a small number of the species having been imported over the years. Seed growing may be the best option these days to improve collection and genus numbers.

Caroa, Nature's Gift to the Nordeste Lyman B. Smith

Life in Brazil's arid northeast is often difficult and its very precariousness has bred a self-reliant stubborn type known simply as the "nordestino." His farms are at the mercy of frequent droughts and the cultivation of most crops is often out of the question. In fact existence would be impossible over much of the area if it were not for nature's gift of certain remarkable plants which grow in great quantity with little or no cultivation. Most of us are already familiar with the story of manioc or cassava, *Manihot esculenta*, which needs only to be planted and har-



Neoglaziovia variegata, growing in its native caatinga habitat in the state of Paraiba, Brazil

vested and which is the staff of life there even more than wheat is with us. Then for commerce with the outside world there is the wax palm, *Copernicia cerifera*, used for polishes and plastics, and the oiticica, *Licania rigida*, whose fruits contain a very efficient paint dryer. However, very few people outside of Brazil have ever heard of the bromeliad fiber plant of the Nordeste, the caroa (pronounced car-WA) or *Neoglaziovia variegata*. This ignorance is due to the fact that relatively little of the fibre is exported, but its production has already made local industry independent in this field.

The caroa has a rosette of a few very long leaves (over 6 feet in many cases) that are spiny and ornamented with conspicuous white cross-bands something like a Sanseveria. Strange to say this acts as a camouflage when the caroa grows with other plants (see Foster and Foster, "Brazil, Orchid of the Tropics" p. 95 and fig. by p. 116). The inflorescence consists of a lax raceme of red and purple flowers and is more ornamental than functional, since the plant's rhizomes serve to propagate it very efficiently. Furthermore the pulpy fruit is so relished by a variety of animals that it rarely is able to mature seeds.

The caroa is also efficient in colonizing the worst soils which are incapable of supporting crops. There it often forms impenetrable thickets and is such a nuisance to travel that people set fire to it as the only means of elimination. However, several states, realizing its economic importance, have passed laws forbidding this destruction even on one's own land.

The Indians used caroa for cordage and fish nets long before the white man came, but its history is very obscure and confused even in recent times. Lauro Xavier in his encyclopedic book "O Caroa" cites several variations on the name



Collected leaves of Caroa are fed through rollers which crush them, then these fibres are decorticated.

that are in common use and also a number of closely similar names that apply to totally different plants. Also there have been several scientific names applied to the caroa since Arruda da Camara first called it *Bromelia variegata* in 1810. The result has been that until late years both foreign and Brazilian authors have heaped error upon error in writing of the caroa and only the local people have known and appreciated it.

After centuries of purely hand work in preparing the caroa fibres, the nordestinos have built machinery and set up small processing plants near the main source of supply. Now a few large factories are built and in the last twenty years an export trade has been built up. The chief supply is still the wild plants, but agricultural experiments are being made both to improve the quality and to provide against the day when the natural product will no longer wholly meet the demand.



The Caroa is spun into a tough cord for sacks, in the Jose Vasconcellos factory in Pernambuco, Brazil

Photos by M. B. Foster

Reprinted from: The Bromeliad Society Bulletin, 1958, V8 (2)

Nutrient Requirements Part 3 of 4 by Les Higgins 2014

A “good feed” is a bad idea. Plants absorb nutrition by osmosis, a process whereby a dilute solution moves through a semi-permeable membrane into a concentrate solution. Solutions of higher concentrate than that inside the plant will cause reverse osmosis and liquid irreversibly flows out of the plant. Death can be the consequence of a “good feed”. Supply nutrient very dilute and very frequently.

At least three types of commercial nutrient packs are available. N.P.K packs are obsolete and supply high concentrations of incomplete nutrients. Two and three part bottles supply all the basic nutrients at low concentrations. Modern single packs giving complete nutrients, trace elements and numerous stimulates are the best.

Chemicals used in N.P.K fertilizers are easily ascertained. Straight chemicals have their element percentage written on the bag. A 'compound fertilizer' is made of two, three or four straight chemicals, rarely five, and mostly selected from a group of: Urea (N 46%) Ammonium Phosphate (N 12.18 P26.98) Potassium Nitrate (K38.6 N 13.86) Potassium Chloride (K 47.0 Cl 53.0) Mono Potassium Phosphate (K 28.73 P 22.74) and up to 10g / Kg of trace elements.

Nitrogen heads the list of declared elements on a fertilizer pack. If urea is stated as 11.50% then 11.50 divided by 46 multiplied by 1,000 = 250 grams of urea. Ammonia needs a companion, usually “water soluble phosphate”, that is ammonium phosphate.

Nitrate is the third listed nitrogen and its companion is Potassium. When potassium is disclosed as 7.70% then 7.70 divided by 38.6 multiplied by 1,000 = 200 grams of Potassium Nitrate.

Two or three part liquid fertilizers are vastly superior to N.P.K. and supply at least fourteen dilute elements simultaneously.

Bottle A contains calcium.

Bottle B contains phosphate.

Additional non combining elements are included in each bottle.

Bottle C is Iron Sulphate.

(Not required if the trace elements include Iron Chelates).

The bottle contents are kept apart and must be individually added to a full amount of water. The phosphate and calcium atoms in solution are at such low concentration that the waters buoyancy prevents an insoluble compound forming.

Hydroponic shops sell two and three part liquid nutrient packs at an absurdly high price for what is less than 100 grams of chemical per bottle.

Formulae appropriate for bromeliads could be:

Bottle A - Calcium Nitrate 20.30 grams
Magnesium Nitrate 36.00 grams
Calcium Chloride 31.50 grams

Bottle B - Magnesium Sulphate 18.00 grams
Potassium Nitrate 37.00 grams
Mono Potassium Phosphate 30.30 grams

Combined give macronutrient percentages:

P 4%, N 1.7%, Ca 2.6%, Magnesium 0.9%, P 1.2%, Sulphur 0.4%.

Small bags of 'complete trace elements' are available at a reasonable price. Making a trace element solution needs a very sensitive balance. The quantities are so minute it is easier to make 1000 X stock solution and dilute as needed.

To one litre of rain water add: 10.00g Iron Chelate (13.30% Fe)
2.50g Manganese Sulphate ($\text{MnSO}_4\cdot 4\text{H}_2\text{O}$)
0.50g Zinc Sulphate ($\text{ZnSO}_4\cdot 7\text{H}_2\text{O}$)
2.50g Boric Acid (H_3BO_3)
0.12g Sodium Molybdate ($\text{NaMoO}_4\cdot 2\text{H}_2\text{O}$)

When 1ml of stock solution is added per litre of foliar solution the concentration of trace elements is:

1.33mg/litre of iron, 0.62mg/litre Manganese, 0.11mg/litre Zinc,
0.44mg/ltr Boron, 0.048mg/litre Molybdenum.

Modern complete liquid nutrients are outstandingly the best.

Nutri-Tech Black Gold has the following formulae:

Kelp, Humates, Fish, Vermicast and Triacantanol
N 4.30%, P 0.39%, K 1.56%, Calcium 400mg/litre, Magnesium 390mg/litre,
Sulphur 0.91mg/litre, Iron 550mg/litre, Boron 10mg/litre. pH 4.5 - 5.7

This fertilizer is not an N.P.K. overload and can be used frequently.

For bromeliad nutrition 'fine tune' Black Gold with occasional foliar feeds of a combination of Potassium Nitrate and Calcium Nitrate.

To be continued: Part 4 of this article next month

Novice Popular Vote

1st Les Higgins *Cryptanthus* 'Ti'
2nd

Open Popular Vote

1st Marie Essery *Alcantarea vinicolor*
2nd Shane Weston *Vriesea* 'Fairy Lace' (unreg.)
3rd Trish Kelly *Vriesea* 'Pink Sensation' (unreg.)
3rd Meg Kerr *Neoregelia* 'Heart Music Too'

Judges Choice

1st Trish Kelly *Vriesea* 'Pink Sensation' (unreg.)

Decorative

1st Trish Kelly *Cryptanthus* 'Rosebud'

Comments from the Growers.

Marie said her *Alcantarea* vinicolor was a pup from a pup from a pup, off her original plant which she purchased from Bob Grant of The Pocket, many years ago. It is grown in full sun in the middle of her backyard and fertilised once a year, no pest or diseases.

Shane purchased his *Vriesea* 'Fairy Lace', from Nigel Thompson in Queensland, he is of the opinion that it possibly has New Zealand breeding and is an unregistered plant, a very beautifully coloured well grown vriesea which grows under 50% biscuit shade cloth and was fertilized last Spring, and would not be fertilised again, no pests or diseases.

Meg originally purchased her *Neoregelia* 'Heart Music Too' from PineGrove, it is growing, hanging high in her shade house where the good light enhances the colours. The shade house has 70% shade cloth, Meg states that she over waters everything, no pests or diseases, with Meg spraying for scale using Crown.

Trish bought her *Vriesea* 'Pink Sensation' (unreg.) as a pup from David Lewis-Hughes about twelve months ago, it is growing under 50% green shade cloth on shelving about a metre off the ground in an east facing shade house in a very well tree protected environment. Fertilised with Osmocote 'exact' once a year, occasionally foliar fed with dilute soluble fertiliser, no pests or diseases.

Les I am hoping to maintain the colour of this redder form of *Cryptanthus* 'Ti' over winter by placing the plant in full sun during the day and taking it into the house at night.