

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

Study Group meets the third Thursday of each month

Next meeting September 15th 2016 at 11 a.m.

Venue: PineGrove Bromeliad Nursery

114 Pine Street Wardell 2477

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Discussion: August 2016

General Discussion

Editorial Team:

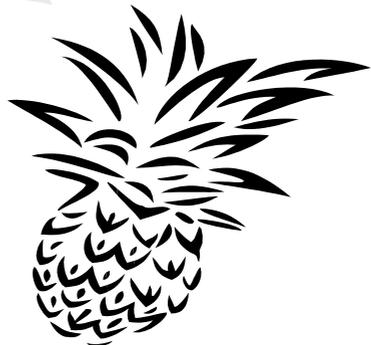
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Meeting 21st 2016

The meeting was opened at approximately 11.00 am
The 18 members and one visitor present were welcomed.
A total of two apologies were received.

General Business

Ross opened the meeting welcoming everyone and distributing the Newsletter.

Our thoughts are with Helen who is visiting her mother in Newcastle, we extended our best wishes and hoping all are well.

On reviewing some of the articles in the Newsletter much discussion was given to the photography and details of the species *Billbergia nutans*. Its characteristics and those of its sub species / varieties including one that has been in our collections for many years known to us as *Billbergia nutans* Sel84-538 which was the tag on Jeanette's plant. This *Billbergia* is a delightful, small growing form (only 100mm high) with the flower pedicle and inflorescence just above the foliage. Ross encouraged the lucky raffle ticket holder selecting this plant to watch and note the flowering and the structure of the petals and appendages and report their findings when next this *Billbergia* flowers.

A very special thanks goes to our valued Western Sydney friends and contributors, Joy and Kerry, for their kind donation of a box of Bromeliad pups for our raffle. All donations are greatly appreciated as these help raise the necessary funds required to cover the cost of our Newsletter and general running costs.

Another discussion, with emphasis on salt laden air, salt water swimming pools, overflowing rivers and proximity to the ocean, revealed many experiences with plants being unaffected. This was evidenced with the recent floods we experienced when some of Gloria's *Alcantarea* collection was inundated with salty flood waters of the Richmond River. Gloria reports so far so good, with advice from well respected growers, she washed the plants out with fresh water after the floods had subsided. It was also pointed out to Members that many of our Bromeliad species grow naturally near the coastline, some right on the beach and others acting as dune stabilisers. Many *Tillandsia* grow epiphytically among mangrove trees.

The Alstonville Flower Show and Exhibition at the Leisure Centre in Alstonville will be held on the 26th and 27th August.

Show, Tell and Ask!

Ted brought in a plant for identification saying he had a sizeable clump in his garden beginning to flower and wanted a name for this beautiful plant. Luckily it was an easily recognisable species with its vibrant rose coloured bracts, we all agreed it was *Quesnelia quesneliana*. (photo p.9)

Ted also wished to know the correct time to remove pups or divide bromeliads. Ross answered that the better time to divide or remove pups was when the particular species/hybrid you are wishing to divide was in its growth period and the pups were large enough to grow independently. Generally it is considered the warmer months are best however some growers with larger collections in the warmer subtropical zones will remove pups year round.

John brought in two examples of upper pupping Bromeliads, these are the group of plants that pup in the upper leaf axils nearer to the base of the inflorescence. One being *Werauhia gladioliflora*, this species is mostly grown from seed as they don't often give more than one pup. The other a hybrid yet to be registered as *Vriesea* 'Ladd's Elation', originally these seedlings were tagged as *Vr. elata*, however as they matured it was realised they were a hybrid not the species. Both plants are about 5 years old, they have been very slow growing, and have recently flowered, and are now sending out pups, upper pups. (photos p.9)

John gave us many laughs as he described the various methods of application and the variety of containers for holding Diatomaceous Earth. John mostly uses a 'dust puffer' similar to the one pictured here for treating his bromeliads for damage caused by ants and mealy bug. This prompted much discussion regards ants living in Bromeliads and their relationship and whether they are harmful to our Bromeliads, hence the request for articles touching on this subject to be printed this month.



John also spoke of the different grades and granule size of Diatomaceous Earth available from his supplier. John will bring a sample of the granular D.E. to a meeting, stating it is more preferable for health reasons, than using Perlite.

Trish brought along a collection of *Alcantarea extensa* plants about 3 - 4 years old, for discussion and comparison. There were three clones in the collection, a dark red tipped and margined leaf form, the second form had dark red marking on the leaf tips and very distinct white trichome banding over all the foliage, while the third form had no red markings and some white trichome banding on the leaf blades. The first two clones were from seedling stock, the third was from a grass pup.

Trish also had a mature seed head from *Alcantarea glaziouana* x 'Whyanbeel' and adventitious/grass pups from the parent plant to share with Members so they may try their hand at germinating seed or growing-on the pups.

Gloria commented that *Alcantarea extensa* was one of her favourites and the banding patterns on the pedicle and floral bracts was amazing.

Gloria suggested that the Group hold a member/grower Sale at the September meeting, to raise much needed funds for our Newsletter. Everyone should come prepared with plants and cash!!!!

Ross has asked that we return the answer sheets from our June meeting quiz as he wishes to analyse the responses to hopefully establish where the focus should be for future meeting topics.

A request was made for articles from members for the December Newsletter as our editor will be having a break during November. Can we please have some contributions from our members by September as Ross would like to be able to have most of the Newsletter complete before leaving. The meeting notes will be supplied by Kay and or Trish as usual and hopefully Jeanette will be your photographer for the day at the November meeting. If all goes to plan we will have about 4 days to get the final copy together with your help.

This is a special plea from your editors, as we spend many, many hours every month preparing notes and articles for your Newsletter, we now need a little co-operation and from some, a rare contribution. These contributions are needed before the November meeting, we need articles which you feel may be of interest to others. The subjects of your offerings (written by yourself) can be: "My Favourite Bromeliad Is and Why" or "The only Bromeliad I Want for Christmas Is."

You may even come across an interesting article / snippet of information in a magazine you may feel could be of interest to others and worth reprinting here. These articles can be passed on to the editors, your hand written articles are acceptable also as we can type it for you. See what you can come up with, please.

Tidy-up Corner

Les, has requested an error from an earlier article be corrected.

FNCBSG Newsletter April 2016 article: **Plants, Minerals and pH**

Correction p.12 - proportions for mixing Diatomaceous Earth into potting mix: 15mg of Diatomaceous Earth (DE) to 1kilo of potting mix. (not 150mg as printed)

Ants In Your Plants by Ian Maxwell 2008 (printed in part from DG web site)

Ants are not a bad thing to have around the garden. They are tireless foragers, cleaning up organic material & hunting pests like slugs & caterpillars. Like bees, they can help plants reproduce as they wander in search of food & in turn, they represent a meal to other garden fauna such as birds & lizards.

A nice way of giving ants a chance is growing myrmecophytic plants. The term myrmecophyte refers to a plant that lives in a symbiotic relationship with ants. This type of behaviour is exhibited by species from a number of different plant families, many of which are also epiphytes or lithophytes. In other words, many myrmecophytes live in the nooks of trees or on rocks & rely partly or wholly on ants for their nutritional intake. Such plants include certain bromeliads, some orchids & ferns, members of the Hoya family & Ant Plants.

At least three bromeliad genera include myrmecophytic species. Some of these house ants & others form part of a larger ant colony & garden complex. One is also carnivorous, trapping insects with its leaves in similar fashion to pitcher plants.

The genus *Tillandsia* features a number myrmecophytes. These are all arboreal epiphytes or 'air plants'. Whilst the leaves of many bromeliads have evolved to collect water & nutrient matter, a characteristic shared by ant-housing species such as *Till. bulbosa*, is pointed leaves that protect ants from rain. This can be seen in other 'air plants' like *Till. butzii* and *Till. pseudo-baileyi*.

The *Brocchinia* family is closely related to *Tillandia*. It includes two South American myrmecophytes, one of which is carnivorous. The pure myrmecophyte is *Broc. acuminata*, an obscure bromeliad with no common name. In terms of bulbous leaf structure, it is similar to the myrmecophytic Air Plants. Its leaves are capable of absorbing amino acids, as are the roots it sends up into its leafy domatium.

Brocchinia reducta is another barely known bromeliad that often appears naturally with carnivorous pitchers. It also features a leaf bulb, but retains the ability to trap water in its leaf tanks. In these pools, insects are drowned & digested through the leaves. Since the plant does not excrete any enzyme, debate has existed regarding its classification as a true carnivore. New research indicates that it releases a sulphur compound that hastens decomposition of trapped insects. This rare behaviour combined with its myrmecophytism make *Brocchinia reducta* a truly unusual species.

The third genus is *Aechmea*, probably the largest of the bromeliad families. Its ant-housing representative is *Ae. brevicollis*, yet another obscure plant. Like most of its myrmecophytic relatives, it features leaves that channel water away rather than collecting it in a tank

Dyckias With a Difference

by Doug Binns 2016

Dyckia is a large genus of well over 100 described species and likely many more to come, but plants are often difficult to identify to species. This is partly because many of the early descriptions were inadequate and based on poor or incomplete herbarium specimens. Difficulties with identification are greatly magnified for cultivated plants due to lack of provenance information and due to the proliferation of hybrids of generally uniform appearance. Despite difficulties at the species level, it is usually instantly apparent that a flowering plant is a Dyckia because most species have the shortly-tubular, brightly coloured (orange, orange-red or yellow) flowers which epitomise the genus. However, there are a few species which, while still recognisable as Dyckias, don't quite have the typical flowers.



Dyckia ferruginea leaf

Quite a few years ago I bought some seed labeled as *Dyckia ferruginea*, but with no information about its origin. I expected just another batch of hybrids but I thought it was worth the risk because *Dyc. ferruginea* is rarely available. The seedlings grew slowly and as they developed, they did not exhibit the tell-tale variation often seen in batches of hybrid seed, so I was optimistic. When they finally got to a size where I thought they might be showing their mature characteristics, they had developed broad leaves and coarse spines and looked more like *Encholirium* than Dyckia.



Dyckia ferruginea flower

Last year one plant began to produce a lateral inflorescence, so at least I knew it wasn't *Encholirium*. It finally flowered and sure enough, the flowers were very similar to those shown for *Dyckia ferruginea*. The flowers are unusual in Dyckia for having exerted stamens (very few species share this characteristic) and inconspicuous yellow-brown petals, in contrast to the brilliantly coloured petals of most Dyckias. It is interesting that the description in Smith & Downs indicates that the stamens are not exerted, but this was later amended because the

original description was thought to be based on immature flowers. My plants were like the images available on various internet sites in that the flowers looked like they don't open, almost cleistogamous – interesting but not really spectacular. Then I happened to go into the garden very early one morning and there was an open flower – not widely open and still not really spectacular, but certainly more interesting. I kept a close watch over the next few days and realised that the flowers open during the very early morning, before daylight and then close soon after dawn. This behaviour is possibly unique in the genus and perhaps explains why internet images that I have seen show only closed and partly withered flowers, because most photography is done later in the day. The plants have been done a great injustice as a result!

Another Dyckia with unusual flowers is *Dyckia ursina*. It is distinctive because it has extremely woolly sepals which almost completely obscure the petals. The outside of the petals is also a little woolly. Its species name is very well chosen. It does not seem to be commonly cultivated, perhaps because the rosettes have only average appeal and the flowers are not as showy as many other species. However, I think it is an interesting species.

Both species probably appeal only to Dyckia enthusiasts because neither is really spectacular, although some plants of *Dyc. ferruginea* have abundant silvery scales and the rosettes are attractive. Both are easily cultivated in pots or in the garden but in my experience *Dyc. ferruginea* is more cold-sensitive than other Dyckias, not surprising considering its tropical origin.

Wikipedia: Dyckia is a genus of the Bromeliaceae, subfamily Pitcairnioideae. The genus is named after the Prussian botanist, botanical artist and horticulturist The Prince and Earl of Salm Reifferscheid-Dyck.



Dyckia ursina developing inflorescence



Dyckia ursina flower



Vriesea 'Sons of Tiger Tim'
1st Open John Crawford



Guzmania hybrid ???
1st Novice Ted Devine



Quesnelia quesneliana
as per Ted's ID request



Tillandsia stricta
grown by Laurie Mountford



Vr. 'Franklin Forrest' x 'Milky Way' unreg.
Judges Choice Jennifer Laurie



'Oh! What a Feeling!'
1st Decorative John Crawford



Werauhia gladioliflora
grown by John Crawford



Vriesea 'Ladd's Elation' unreg.
Grown by John Crawford



'Crypts in Bowls'
grown by Jeanette Henwood



Tillandsia tectorum
grown by Laurie Mountford

Photos by: Ross Little

Quesnelia quesneliana

by Geoff Lawn

A species flowering in mid-spring is *Quesnelia quesneliana*. Of Brazilian origin, this attractive plant grows near sea level on the coastal sands as a terrestrial, to adjacent scrub forest from Espirito Santo to Rio de Janeiro. After many name changes since its discovery in 1841, L.B. Smith gave the species its present classification in 1952. The term quesneliana means the original quesnelia, the genus having been named to honour M. Quesnel, a French consul in French Guinea of the period.



Quesnelia quesneliana is usually seen as an open largish outspreading rosette to one metre diameter, although two metre high specimens are recorded in the wild. The slightly scurfed bright green foliage has a dusky pink banded reverse and lightly spined broad leaves which narrow to a spiked tip. The erect woolly flower stalk bears a cone shaped head of shingled crepe-paper like rosy red bracts edged with white dots. The white petals margined blue complete the torch like inflorescence, which unfortunately seldom exceeds a fortnight in bloom. Few hybrids from this species are listed, the one noteworthy bigeneric cross being: *xQuesmea* 'Lymanii' (*Ques. quesneliana* x *Ae. distichantha* var. *schlumbergeri*).

Some quesnelias are not considered free-flowering, but this species spikes annually with moderate care, the few pups produced on stolons mature in 12 - 18 months. In its native habitat *Quesnelia quesneliana* forms dense clumps but grown as single rosettes this species looks equally effective. Tough and adaptable, specimens can be grown in large containers or humus-enriched garden beds in semi-shade to filtered sun.

Reprinted from: BROMELINK,
September / October 1983, Vol.5, No.2
Bi-monthly Journal of the Bromeliad Society
of Western Australia Inc.

Quesmea 'Lymanii'
photo Maurice Kellet ▶



Some Amazing Bromeliads — Part One by Derrick. J. Rowe

Derrick's enormous interest in natural History and his wish to collaborate and share has prompted his writings in botanical journals worldwide.

This has culminated in the publishing of his own DVD book entitled:

"Ant-plants: Arboreal Wonders of Nature."

See www.australiansucculents.com An entire section is devoted to some particularly fascinating Bromeliad groups. Other interesting and relevant aspects are presented in an opening section devoted to epiphytic plants in general. This provides much background information to help cultivators better understand their plants. Derrick has kindly volunteered to also write this series of articles specifically for the Bromeliad community.

When writing for specialist bromeliads cultivators there is no need to emphasize the often magnificent aesthetics of this enormously varied plant family. Yet there is a great deal more to these truly fascinating plants than their unique beauty. Phytotelm or tank bromeliads are the species that between rainfalls retain water-reserves termed phytotelmata (singular phytotelma) in leaf rosettes and some biologists use a definition that also includes those species that store water only in individual leaf axils, yet the result is much the same and some species use both methods; hence, regardless of the exact storage method the end result is aquaria-like water storages. All types will be considered phytotelm (tank) bromeliads herein.

Whatever the water storage form, it helps protect bromeliads from the worst rigours of dry spells between the intermittent rainfalls of their habitats, either arboreal or terrestrial. Indeed, some larger species are recorded as holding up to twenty litres of water after rain events. Yet there is far more to this than an easier existence for bromeliads because their water trapping habits have enormous impacts upon entire ecosystems especially arboreal ones, the prime focus of these notes. For example, one study in an admittedly sodden Colombian cloud forest estimated that bromeliads impounded over 50,000 litres of water per hectare (Fish 1983 cited by Benzing1990). Indeed, phytotelm bromeliads are so successful, so enormously varied, so numerous and widespread throughout the tropical forests (and beyond) of the Americas that large numbers of animal species are partly to totally dependent upon them for their very survival. Other, perhaps not so immediately obvious ecological benefits are increases in canopy humidity levels and a large increase of surface living areas in tree crowns that provide enormously more habitat niches. A very ecologically important example is that without epiphytes, bare tree branches would have few to zero nesting sites for ant colonies (Benzing 1990). This is hint number one.

Transient phytotelm users such as monkeys, snakes or lizards may want only a passing drink or snack but many frog and salamander species are dependent upon bromeliad phytotelmata for breeding and perhaps surprisingly, so are certain crab species such as the aptly named Bromeliad Crab *Metopaulias depressus* in Jamaican rainforests (Diesel et al. 1993). Insect species, especially aquatic juveniles; centipedes, millipedes, spiders and many other arthropods, even a few scorpion species; plus snails, worms, nematodes and numerous other creatures including weird but fascinatingly cute peripatus species add to an enormous list of bromeliad-living animals. Microbial and other life forms such as algae, bacteria, fungi and even parasitic plants add immensely more (Frank et al. 2009). There are probably more bromeliad users than there are of the 3,494 currently known bromeliad species.

This outline of animal inhabitants shows that not all closely associated life forms are aquatic because older, humus-filling, hence increasingly drier outer leaf-gaps, especially in higher horizons of canopy soil accumulations provide a series of habitats for ever more dehydration resistant life forms that even include ant colonies. Hint number two. Incidentally, bromeliad phytotelmata are termed aquaria, while humus filled, outer leaf gaps are called terraria by biologists and humus accumulations in forest canopies are termed canopy soils by biologists. It is not at all surprising that phytotelm bromeliads have been described as 'complex ecological microcosms' by the distinguished canopy researchers Lowman & Parker (2004). Continual spatially close relationships of life forms are classed as symbiotic which essentially means two (or more) species living together and where such a relationship is beneficial to all parties involved, it is defined as being a mutualistic symbiosis. Phytotelm bromeliads also impound fallen organics, flow-through (dripping) nutrient-containing leachates both plant and animal derived and predator species bring in organics from beyond their adopted homes. The waste products of all occupying life forms help to contribute to the nutrient acquisitions of phytotelm bromeliads as impounded organics are catabolised (broken down) to simpler molecules with the help of resident detritivores (humus feeders) both 'terrestrial' and aquatic, so that end-product nutrients may be extracted by home plants.

Therefore, these relationships form a highly complex web of generalised symbiotic mutualisms. They are considered to be generalised mutualisms because resident life forms are seldom if ever restricted to any one bromeliad species.

The horticulturally popular *Tillandsia* genus surely needs little introduction in journals like this. Among their 551 species (Smith & Till 1998 cited by Chew et al. 2010) there is a vast array of forms from miniscule to gigantic that are spread

over enormously varied habitats throughout the Americas. These vary from terrestrial to arboreal; from sodden forests to arid deserts and from hot, humid, lowlands to high and cold mountains.

Here however, we are concerned primarily with a small group of species within a larger assembly of atmospheric *Tillandsia* species known popularly as air plants. Atmospheric *Tillandsia* are species that manage to survive in what are intolerable sites for many other vascular epiphytes. The word vascular in botany includes all 'higher' plants, those with water conducting tissues such as ferns, fern allies and all flowering plants.

Some air-plant species such as the so-called Ball Moss *Tillandsia recurvata* are able to live extremely successfully in exceptionally exposed positions such as on enormous and extremely hardy cacti, with the Cardon *Pachycereus pringlei* that survives in the harsh deserts of Arizona, USA and Sonora, Mexico being an exemplary example. Indeed, this immensely widespread bromeliad even survives on fence and telephone wires in very dry areas.

The evident success of air plant bromeliads is certainly dependent upon their trichome coated leaves that are able to super-efficiently glean not only moisture but essential nutrients from the atmosphere. Although these nutrients are derived primarily from airborne dusts and aerosols, much evidence is emerging that microscopic life forms such as bacteria, cyanobacteria, algae and minute species of fungi etc., that live in complex microbial communities on rough *Tillandsia* leaf surfaces help in the conversion and provision of plant-essential nutrients; especially by nitrogen (N₂) fixing microbe species. (e.g. Puente & Bashan 1994).

Nutrient uptake of plants is obviously highly dependent upon water supply; therefore, the more arid an environmental niche becomes, then the greater a plant's problem of feeding itself. A few bromeliad species, primarily in the *Tillandsia* genus have evolved a fascinating solution to this problem but first a slight preparatory diversion.

A Powerful Force

Ants are such prolific creatures especially in tropical forests that they are estimated to make up about two thirds of our entire planet's insect biomass. Ecologically that makes for an incredibly powerful group of insects. Moreover, they are so highly industrious they can be modifiers of entire ecosystems and actual creators of fascinating environmental niches such as ant-gardens. Therefore, it is not at all surprising that plants are well adapted to the presence of ants and

often make use of them for a variety of purposes such as spreading their seed (myrmecochory) and/or as a very effective defence against the many animals from minute to enormous in size that would like to eat them.

In order to encourage protective ant colonies to remain nearby, many plant species across numerous families actually feed or even provide ready-made homes for their 'tame' ants. For example, the tree species *Acacia drepanolobium* on the Great Plains of Africa provides ants not only with food but with ready-made homes in the form of hollow thorn ant-domatia. Domatia translates as little homes. A study has shown that Giraffe and even Elephant are deterred from at least longer periods of browsing by the particularly aggressive mutualist ant-colonies that live only in these *Acacia* species. Not a bad effort from such tiny animals! The ant defence is so successful against the greater damage elephants are capable of inflicting, that in regions with overly large pachyderm populations, *A. Drepanolobium* becomes the dominant tree species as others are destroyed. (Goheen, et al. 2010.)

Plants that provide ants with ready-made homes are called myrmecophytes which basically means ant-plant, their popular name. Arboreal myrmecophytes have somewhat differing needs to terrestrial species that naturally have access to groundwater and its dissolved nutrients. It follows that for some arboreal ant-plants in inhospitable nutrient-poor environments, being fed may be more important than defence. Certainly Australian and at least some South East Asian ant-plants seem to need nutrient acquisition more than defence (Jansen 1974) but the issue is not as clear for ant-plants in the Americas. However, both continents require more field studies of the many differing arboreal ant-plant ecologies.

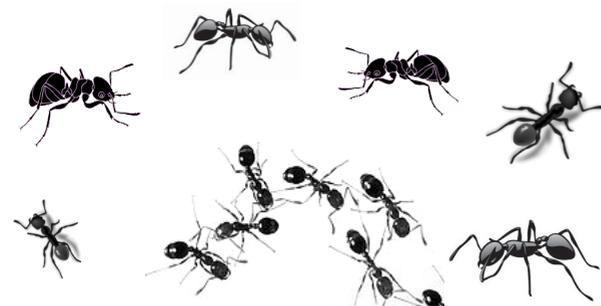


Diagram taken from:
DG web site

Novice Popular Vote

1st	Ted Devine	<i>Guzmania</i> hybrid ???
2nd	-----	-----
3rd	-----	-----

Open Popular Vote

1st	John Crawford	<i>Vriesea</i> 'Sons of Tiger Tim'
2nd	Jeanette Henwood	<i>Tillandsia bulbosa</i>
3rd	Jennifer Laurie	<i>Vriesea</i> 'Franklin Forrest' x 'Milky Way' unreg.

Judges Choice

1st	Jennifer Laurie	<i>Vriesea</i> 'Franklin Forrest' x 'Milky Way' unreg.
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Decorative

1st	John Crawford	'Oh! What a Feeling!'
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Comments from the Growers:

Ted grows his *Guzmania* as he does most of his collection of Bromeliads in his garden under large trees. Often is the case he was surprised to find another in flower. He is amazed at how well these plants grow with little attention.

John grew *Vriesea* 'Sons of Tiger Tim' in his shade house in summer under 50% white shade cloth with a second layer of 30% green shade cloth. In winter John removes the green shade cloth. He uses long life slow release fertiliser, prefers rain water when available and re-potted his *Vriesea* in June 2016.

Laurie grows his *Tillandsia* mounted on a large slab of cork in his shade house where it gets all day sun. They are watered regularly and foliar fertilised when he feels they need it.

Jeanette grows her *Tillandsia bulbosa* hanging on the garden fence where it gets morning sun. She is concerned with the number of ants active around her *Tillandsia* and the possums that like munching on her plants.

Jennifer grows her *Vriesea* 'Franklin Forrest' x 'Milky Way', a Jack Koning creation in her shade house which receives sun most of the day and has a 70% beige shade cloth covering. Jennifer is unable to give us the details of the Hybrid breeding, she had forgotten to place the label with the plant after repotting. Jennifer uses slow release fertiliser when re-potting her plants and rain water when available, although she did comment that it has rained a lot this year at her place making watering unnecessary.

Jeanette has been experimenting with her Cryptanthus, this time, planting them in glass tumblers without drainage holes. She has layered the materials in the tumblers, placing charcoal at the base, a layer of good potting mix on top and then a layer of fine gravel around the Cryptanthus. This growing method requires constant attention to watering which is done very sparingly. We look forward to viewing the results!

John grows his Decorative winning Tillandsia on a shelf in the same shade house as his Vrieseas offering them little more attention than he does all his other plants growing in the same area.

Bromeliads and their Fauna

Bernard F. Stoner

And how about ants? Are they useful, harmful, or just neutral? There are species of bromeliads, notably *Aechmea mertensii* which are said to need an association with ant nests for successful growth. Obviously it is not the insects themselves which are beneficial but the material contained in the nests. It is quite common to find a flourishing colony of ants in the tube of a plant which has been kept rather dry. There does not seem to be any damage to the plant in these cases, unless the presence of the ants prevents the plant from developing a flower. It might be interesting to conduct a few experiments with ants to see just what effect, if any, they do have. The ants referred to here are a small black species which is abundant in Western Australia, but does not poison or sting, thank goodness. Plants growing in their natural surroundings are said to contain an assortment of livestock, including many ants, but I have never seen any suggestion that these ants are in any way harmful to the plants.

Reprinted in part from: BSI Journal - 1981 V31(5)

Ants, Friend or Foe

At our July meeting we discussed the issue regards ants and Bromeliads hence the articles printed here regarding the symbiotic relationship ants have with many of our Bromeliads. All indications are that ants living in Bromeliads are helpful with their refuse aiding in feeding the plant (Friend!).

However lets us not forget that ants move mealy bugs from plant to plant which has been reported on, in articles written by Les Higgins in previous issues of our Newsletter. This is when we need to be concerned about ants and Bromeliads and control their spreading of pests (Foe!).