

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

Study Group meets the third Thursday of each month

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

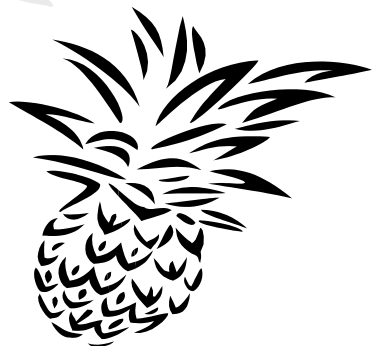
Venue: PineGrove Bromeliad Nursery
114 Pine Street Wardell 2477
Phone (02) 6683 4188

Discussion: June 2018
General Discussion

Editorial Team:

Ross Little
Helen Clewett
Les Higgins

pinegrovebromeliads@bigpond.com



Statements and opinions expressed in articles are those of the authors and are not necessarily endorsed by the Group.
Articles appearing in this News Letter may be used in other Publications provided that the source is credited.

Meeting 17th May 2018

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

General Business

The May meeting was informal and in the absence of Ross it was supervised by Helen. Welcome back Trish, it's good to see you back on your feet again.

As promised last month John introduced samples of Verde-cal-K-Plus. The declared analysis is American "Oxide Potential" 0-0-15. Australia's "Elemental Value" is 0-0-12.5. The Fertiliser Act's description is a "Straight Fertiliser". The declared ingredients include: Sulphate of potash magnesia (an unusual double salt). Potassium sulphate and Soluble potash described as K_2O . In Australia K_2O is Potassium oxide.

The explanation for "Plus" in the title is there are inclusions not required for declaration under the Fertiliser Act. Those inclusions are: Sulphur 14.5% combined from three sources (an un-necessarily high quantity). Calcium sulphate (Ca7.5%) a metal not normally used in a commercial mix. Fe 4.0% as Iron Humate, (Iron mixed with organics such as compost liquid or worm juice, it feeds microbes). Water soluble Mg 2% is a minor nutrient and Water soluble Mn 0.25% is a catalyst.

Verde-cal-K-Plus formula has NO Nitrogen and NO Phosphate. High levels of Sulphate and Potassium prevent the inclusion of Nitrogen. Calcium combines with Phosphate to make Tri calcium phosphate and both become insoluble. The intention of this formula is to provide minerals not available in commercial fertilisers. Verde-cal-K-Plus is pH 6.0.

Verde-cal-K could be made into a complete "cold weather nutrient" by including in the substrate Soft Rock Phosphate (mono calcium phosphate). This is saturated Calcium and Phosphate that cannot further combine with either Ca or P and Trace elements. Folia sprays of Nitrate are essential and could be satisfied by Magnesium nitrate ($MgNO_3$) (homemade details in next month's Newsletter).

In warmer weather use folia sprays of Urea and Magnesium nitrate. Sodium molybdate would be needed as the catalyst for nitrate. Nickel chloride is the catalyst for ammonium and urea. (both catalysts are in a pack of Complete Trace Elements). Nitram (ammonium nitrate) would be excellent but sales are restricted to registered users.

The Non-plant food 2% L-Amino Acids is microbe food. Microorganisms could accelerate growth in plants and may give increased protection against pathogens. Verde-cal-K-Plus is almost certain to contain microorganisms in suspension.

The statement "Apply this product only to your lawn/garden and sweep away surplus that has fallen on pathways" indicates the intended use is as a solid. It would clog spray nozzles as the calcium combines with sulphate to make gypsum. Verde-cal-K-Plus should be lightly sprinkled on the surface of the soil/potting mix and watered-in.

Conclusion: The Fertiliser Act describes N.P.K plus S as a Complete Fertiliser. Verde-cal-K-Plus supplies the lacking minerals in abundance. Initially there would be an explosion of growth as plants take-up needed minerals. The microorganisms would give a constant growth advantage. Be prepared for more frequent re-potting as microorganisms consume the organic material of the potting mix .

Show, Tell and Ask!

Show and Tell was very informative this month with John introducing to us *Cryptanthus* 'Crazy Moon', an extremely desirable plant. *Crypt.* 'Crazy Moon' was compared to *Crypt.* 'Cheerful' to show the two forms of *Cryptanthus*: one being an upright form and the other a flat 'Earth Star' shape. (photos p.8)

John then followed with information about *Goudaea ospinae* and *Goudaea* 'Sons of Tiger Tim' the later was a hybrid bred by Peter Tristram from select forms of *Goudaea ospinae* var. *gruberi*.

Sue brought in *Wallisia cyanea* with a well advanced green paddle. Suggestions to make colour in the paddle included: "Put the plant in maximum sunlight during the day and bring it into a warm room at night".

(Or is that *Wallisia* 'Duvallii', refer FNCBSG Newsletter November 2016, p.6-7.

Wallisia or Single Paddles, by Derek Butcher).

Readers wishing to access past articles published in FNCBSG Newsletters refer www.bromeliad.org.au Club News or e-mail the editors with your request.

Gary wanted to know about the labels John is using. They are sticky backed labels supplied as a ribbon and printed on a small machine linked to a computer. John is very satisfied with them as they never fade and are never lost. The set up-price to make the labels has now become prohibitive.

Use a 2B pencil or a engraving tool on plastic labels is an effective permanent solution, aluminium tags, a ball point pen or similar will indent plant name into.

This month's raffle had many quality plants and Johns paper labels were very conspicuous on several pots. Thank you to those who donated raffle plants.

Trish asked John about his raffle donation x*Sincoregelia* 'Ralph Davis', a clump of three large off-sets. John said he prefers pups of this plant to be well advanced in growth before separation.

Chores for the Month

Night temperatures are now approaching the seasonal lowest level. Prepare plants for a rest period during cold weather.

At the end of this month keep *Cryptanthus* dry (as reasonably as possible) and dormant in temperatures not below 5°C until the first week in August. Water only if necessary and in limited amount, make sure the leaves become wet. Ensure plants dry before nightfall. Cold and a wet substrate is an invitation to root rot.

Among the most difficult plants to keep alive over winter is *Araecoccus* sp. Unless this epiphyte is warm and dry its goodbye. Aechmea in the chantinii group e.g. 'Samurai' and 'Shogun' especially are best kept on the drier side during the cooler months, hanging these as high as possible in your shade house helps as cold air sits lower to the ground. Soft leaved plants like *Aechmea* 'Fia' and *Ae. fulgens* var. *discolor* 'variegated' should be given extra special care, move these into your warmest area or take inside your house at night. If bringing seedlings, cuttings, pups and delicate plants indoors, preferably place them against a north facing window. There are too many cold sensitive plants to list here, best advise is "if in doubt take extra care, don't run the risk with it."

There should be no attempt to stimulate growth now until spring, therefore no nutrient applications for now. Exceptions: only plants showing signs of growth.

Give maximum light to all plants. Strip as much cover as practicable from shade houses, remove throwovers used for additional summer shade.

Clear plastic can be used on shade houses to avoid rain soaking the plants. However, a full plastic enclosure always makes the interior colder than outside.

Cover garden plants with newspaper or frost cloth whenever there is a possibility of frost, old bed sheets also help beat the frost.

Lucerne hay gives frost protection by keeping plant roots warmer, as it decays a growth stimulant is released, however hungry herbivores can be a problem, so if you have kangaroos in your area use straw. Vermin can find protection to overwinter in a shade house and may destroy some plants. Place Ratsac® in a short piece of drainage pipe and protect it from becoming wet.

Edundoa

by Derek Butcher May 2018

It has taken us some time to accept that *Edundoa* is a special sort of the old *Canistrum*. I try to think of them as having hairy flowers! I had always thought that *Edundoa ambigua* had red primary bracts even though this is not mentioned in the description but recent photos on Florapix has shown these can be green. This started me pondering why we had *Edundoa lindenii* var. *rosea*.

In the 1980's we had: Key to Varieties and Forms of *Canistrum lindenii*

1. Primary and outer bracts yellowish white to nearly white, sometimes faintly green at apex; inflorescence 100-500 flowered. 7a. var. *lindenii*.
2. Inflorescence sunk in the center of the rosette or raised only slightly 7a. var. *lindenii* 1. forma *lindenii*.
2. Inflorescence raised 20 cm or more above the center of the rosette. 7a. var. *lindenii* 2. forma *elatum*.
1. Primary and outer bracts coloured green or rose; inflorescence 50-90 flowered.
3. Primary and outer bracts green. 7b. var. *viride*.
4. Inflorescence raised 20 cm or more above the center of the rosette. 7B var. *viride* 3. forma *magnum*.
4. Inflorescence sunk in the centre of the rosette or raised only slightly. 7b. var. *viride* 4. forma *parvum*.
3. Primary and outer bracts rose to bright red. 7c. var. *roseum*.
5. Inflorescence raised 15 cm or more above the centre of the rosette. 7c. var. *roseum* 5. forma *procerum*.
5. Inflorescence sunk in the centre of the rosette or raised only slightly. 7c. var. *roseum* 6. forma *humile*.

Then in 1997 we had *Edundoa lindenii* (Regel) Leme, var. *lindenii* *Canistrum* – Brom Atl. Forest 46-51. 1997 where all the varieties disappeared except for var. *rosea*. This is what Leme had to say at the time:

After examining numerous *Ed. lindenii* plants in the wild, Reitz (1950, 1952) arranged this material in varieties and forms, separating the type variety with its yellowish, whitish or greenish tipped bracts from the variety *viride* with its entirely green bracts. He subdivided these varieties into forms based on the length of the floral scape (inflorescence sunken or raised). He used the same criterion to establish forms for the variety *rosea*, and also mentioned the smaller number of flowers in this variety when compared to the type variety.



La Belgique horticole, 1879, pl. 308 CANISTRUM EBURNEUM. Brasil, Serra chaude



La Belgique horticole, 1883, pl. XIV - XV CANISTRUM ROSEUM. Brasil, Serra chaude

Reitz's criteria were discarded here because, though very logical from an horticultural point of view, they are decidedly artificial. The colour gradation of the involucral and primary bracts, from yellowish to whitish to green, falls within a very narrow range of chromatic variation, so

much so that some specimens even have a combination of these colours (yellowish or whitish with a greenish apex). Furthermore, in the post flowering stage, the yellowish-whitish bracts may become greenish toward the apex (pers. obs.). The continued use of this criterion would encourage the establishment of numerous, biologically inconsistent varieties. For this reason, the variety viride with its entirely green bracts was considered to be a mere colour variation of the type variety, and was therefore placed in synonymy.

The creation of forms based on scape length was also seen as artificial. I observed that specimens with a well-developed scape, that raised the inflorescence well above the rosette, became more compact and produced much shorter scapes when grown in cultivation, under a uniform, more intense light regime. The inflorescence was no longer perched above the rosette in these plants. Obviously, the variability that so strongly influenced Reitz is seen in the wild. But given the overall variation pattern of the species, this criterion becomes inconsistent and artificial, and segregates plants nomenclaturally that are practically identical. The taxonomic forms based on this criterion are placed in synonymy. The number of flowers also varies according to the stoutness of the plant and is discarded here.

Despite his reasoning Elton Leme still accepted var. *rosea* for its red primary bracts. We now see *Edmundoa lindenii* var. *rosea* (E. Morren) Leme: Considered a synonym of the type variety - Refflora (cont.upd.) *Lista de Espécies da Flora do Brasil*. Jardim Botânico do Rio de Janeiro. <http://floradobrasil.jbrj.gov.br/> (Retrieved 28.3. 2018).

In 1997 Leme also reported, "In Rio Grande do Sul, var. *lindenii* and var. *rosea* are sympatric and may be found in the same area (J. C. da Silva, pers. Comm).



The reason I am saying this is that Peter Tristram of New South Wales, Australia received seed called *Edmundoa lindenii* from Rio de Janeiro Botanical Garden which had red primary bracts on flowering. Has this instability in colour of primary bracts been noted by other seed raisers? Or has the Rio de Janeiro Botanical Gardens dropped the use of 'var. *rosea*'?

What has happened to all those varieties/forms mentioned by Reitz. Are they still being grown? What names are on the labels? There seems to be no record in the Bromeliad Cultivar Register other than the variegated E. 'Alvim Seidel' and 'Brazil'.

If var. *rosea* is treated with *Edmundoa lindenii* what will growers call the one with the red primary bracts. The ICNCP rules frowns on the use of colour as a single word and we could go back to the Lectotype where Comte de Germiny is involved and call it *Edmundoa* 'Germiny' but somehow I cannot see this being noted by horticulturists. I can see *Edmundoa* 'Rosea' being accepted and acted upon, and that will be my course of action.

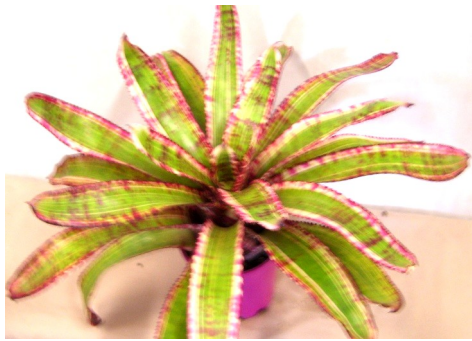
We have Flora do Brasil 2020 ignoring the existence of sub-species of *Edmundoa lindenii* and The World Checklist of selected Plant Families by Kew Gardens preferring the genus name *Canistrum* to *Edmundoa* which makes you wonder where we go next. While the botanists dither, at least having 'Rosea' in the BCR will give you a reference point.



The hairy flowers (left) and inflorescence raised above the centre of the rosette (right).



Photos by Ross Little and Derek Butcher.



Neoregelia 'Highland Fling'
1st Open John Crawford



Aechmea fasciata
1st Novice Kevin Jones



Goudaea ospinaea var. *gruberi*
grown by Steve Davidson



Guzmania 'Limonas'
grown by Marie Essery



Tillandsia 'Bob's Amigo'
1st Tillandsioideae and
Judges Choice John Crawford



'Towering Orthophytums'
1st Decorative Helen Clewett



Guzmania hybrid ???
grown by Kay Daniels



Neoregelia 'Lorena'
grown by Keryn Simpson



Cryptanthus 'Crazy Moon'
shown by John Crawford



Cryptanthus 'Cheerful'
grown by Les Higgins



Quesnelia 'Tim Plowman'
grown by Flo Danswan



Aechmea 'Pink Panther'
grown by Dave Boudier



Orthophytum schulzianum
grown by Jennifer Laurie



'The Royal Cup for Harry and Meghan'
shown by John Crawford



'Guz Heaven'
shown by Keryn Simpson



'Great Balls of Fire'
shown by Dave Boudier



Till. fasciculata
var. *uncispica*
Coral McAteer



Till. 'Moonlight'
Sue Mackay-
Davidson



Till. caput-medusa, ionantha, fasciculata
grown from left to right by Dave Boudier,
Gary McAteer and Keryn Simpson

Growing Foliage Vriesea

by Richard Harper 2018

Foliage Vriesea are the main type of Bromeliad I grow and are my passion.

They give great colour and pattern to any garden or shade house all year round.

Foliage Vriesea have come a long way in the last 10 years or so with a diverse range of colours, types and patterns now available.

I have them growing under 50% black shade cloth which I find gives great colour in my climate: Kempsey - Mid North Coast NSW.



I like to grow them in a mix of 50% good quality potting mix and 50% course bark with some seamungus (fish, seaweed, manure & humic acid) mixed in and a pinch of slow release fertilizer on top of the pot.



I have been hybridizing for over ten years and still enjoy watching seedlings develop from small green plants to plants with colour and patterns.

Vr. 'Bow' named after our little Westie.

Vr. 'Richardo' no prize for guessing.



I like to pot individual seedlings quite small and then pot them up several times as they grow while fertilizing with a week solution (half strength) Aquasol twice a week. I have had good results with strong growth and get plants to maturity and flower in about 4 to 5 years. It takes time and patience but the rewards are worth it.

Happy growing to all Bromeliad lovers.

A Colorful New Vriesea from Colombia by Harry E. Luther

In 1983 I described *Vriesea ospinae*, a very pretty species that had been in the horticultural trade under a variety of names¹. There was no information available concerning who collected the plant or where although at least five amateur and commercial growers provided flowering specimens to the Bromeliad Identification Centre. The species became well known in private collections where it was sometimes allowed to develop into large clusters of offsets surrounding the mother plant. The light green leaves with delicate tracery form attractive specimens although hobbyists have noted that it is reluctant to flower.

A new variety of *Vriesea ospinae* has recently been discovered. Compared to the earlier collections of the species, which are native to Meta², the plants of this new variety present a more robust, compact appearance, a distinction maintained under cultivation. According to the collector's notes, this plant forms well-rooted clusters on the ground in full sun under very damp and humid conditions.

The description follows:

***Vriesea ospinae* Luther var. *gruberi* Luther, var. nov.**

A var. *ospinae* Luther, cui similis, laminis foliorum latoribus et loratis vel lanceolatis (non triangulatis) et tessellatis castaneis (non atroviridibus) differt.



***Vriesea ospinae* var. *gruberi*.** A clone of the type collection in early bud.
Note the broad, distinctly marked, lingulate leaf blades.

Type. Colombia: Casanare (Boyaca); San Luis de Gacano, 3-500 m.
Flowered in cultivation, 10 Oct. 1990, Franz Georg Gruber s.n. (SEL, holotype; HUA, isotype).

Plant short caulescent, flowering 35-65 cm tall. Leaves densely rosulate, 25-35 cm long. Leafsheaths elliptic, 6-10 x 4-6 cm, densely ferruginous lepidote. Leaf blades lingulate to lanceolate, 20-45 mm wide, broadly acute with a reflexed, abruptly acuminate apex, pale green or pale yellow-green with dark reddish brown or purple tessellations. Inflorescence usually compound, yellow, similar to the type variety.

This new variety differs from the original in the following characters:

- 1) leaf blades lingulate to lanceolate vs. triangular.
- 2) leaf blades broader, 20-45 (mostly 35-40 mm wide vs. 18-35 (mostly 20-30) mm wide.
- 3) leaf apex broadly acute and abruptly acuminate vs. evenly tapering.
- 4) leaves tessellated dark reddish-brown or purple vs. dark green or reddish-green.

Paratypes. Colombia: presumably from the type locality. Ex hort. Franz Georg Gruber via Dennis Cathcart, (sterile!), 1 Sept. 1990, H.E. Luther s.n. (SEL); exhort. Franz Georg Gruber, flowered in cultivation SEL 90-728, 5 Jan. 1991, H.E. Luther s.n. (SEL).

This beautiful new *Vriesea* is dedicated to Franz Georg Gruber who grows many native and exotic bromeliads in his nursery in Fusagasaga, Colombia. It is a spectacular ornamental sure to become popular in horticulture.

The M.B. Foster Bromeliad Identification Centre
The Marie Selby Botanical Gardens, Sarasota, Florida

¹Journal of the Bromeliad Society 33: 23-24 includes John P. Barbie's painting of *Vriesea ospinae* var. *ospinae*.

²Rolf Rawe, pers. comm., 1983. Meta is a department of Colombia south and east of Bogota. The capital is Villavicencio.

Reprinted from: Journal of the Bromeliad Society Vol.42, May-June 1992, No.3.
Photo: Vern Sawyer for Selby Gardens.

Note: DNA Revision of Tillandsioideae Nomenclature Changes
FNCBSG Newsletter March 2017, the *Vriesea* referred to in this article are now in *Goudea* e.g. *Goudea ospinae* and *Goudea ospinae* var. *gruberi*

Tillandsia Part 3 - Bulbous Types

by Les Higgins 2018

Bulbous Tillandsias naturally grow under or on the side of a branch. Between the leaf segments is air space that gives a fragile feel to a recently collected plant. Gently holding the bulb can be sufficient to cause the outer leaves to bend into the cavity. The plant's downward location on the branch would prevent water building up within the leaves.

The bulbous shape is considered to have evolved as a symbiotic relationship with ants. A hole in the outer leaf is invariably present in wild collected *Tillandsias*. Ants enter the plant through the hole and construct out-stations within the leaf spaces. Plant collectors report that considerable numbers of ants inhabit a bulbous plant. Ants are credited with protecting the plant against herbivores (and collectors). Within the leaves is ant excrement, left-over's of their prey and dead ants. Combined they form a decomposing concoction that ultimately becomes myrmecophytic nutrition.

Apparently the plant submits to a symbiotic relationship only when nutrient deficiency is extreme. Occasional misting of dilute nutrition causes all ? bulbous *Tillandsia* to become hard. Ants have no interest in a cultivated plant. Water cannot collect between the leaves of a solid plant thus allowing the cultivated plant to grow in any position. A phenomena known as ageotropism.

Bulbous types owned by the writer are *T. bulbosa*, *T. butzii*, *T. caput-medusa*, *T. paucifolia*, *T. pruinosa* and *T. pseudobaileyi*. All are mounted on aged Australian bush timber. Lumps of She Oak and pieces of Tea Tree are used. *T. fucshii* seems most at home sitting on the very top of a mount.

To successfully mount a Tillandsia requires the plant being held firmly in place until it produces roots. The writers techniques include: The surface of the mount may have a groove or one can be cut into it. The Tillandsia is placed in the groove then held in place by a piece of bark that in turn is held down by a weight. This method speeds up the growing time of roots. An elastic band or a length of elastic is another method to gently hold a plant onto the mount and allows rooting to be unfettered. Glue is something that is used as a last resort. When glue is used sprinkle it with crushed bits of the mounting to make a concealment.

To encourage maximum root extension the writer places a piece of damp bark across the root area. The intention is to create a prolonged humid atmosphere. Every possible attempt is made to impregnate the mount with nutrient in the belief that it will encourage root exploration.

After flowering keep a bulbous Tillandsia as an unbroken clump. Whenever a bulb dies it will have transferred its nutrition into the other plants helping the clump to remain strong.

Books detailing habitat conditions are interesting, however what is needed is local information on Tillandsia cultivation. In a few words, if possible, would each reader please tell how they successfully grow, or have failed to grow, the genus Tillandsia. The thought of a future Newsletter with an addendum of lots of growing hints is very appealing! What interesting observations have you made?

Here are a few prompts:

How do you supply water to your Tillandsias? Mistlers, hose nozzle, foggers etc.

What type of fertiliser do you use?

How do you apply epiphyte nutrient?

What Tillandsias give off fragrance?

What Tillandsias do you grow in potting mix?

What material do you use for mounts: tree branch, grape vine, cork, etc.?

Growth response to various mounts?

Non-rooting conditions?

How can rooting be stimulated?

What Tillandsias don't produce pups?

Time taken from pup emergence to flowering?

Flowering time of year?

Experience of a pest or disease?

Plants lost through cold, heat, wet or?

The three **Tillandsia** articles I (Les Higgins) have written are no more than one person's very limited experience and knowledge. Constructive criticism of those articles would be appreciated.

To maintain an informative Newsletter your input is needed.

Web Links for Checking Correct Identification and Spelling ?

Bromeliad Cultivar Register (BCR): <http://registry.bsi.org/>

Refer to this site for correct identification and spelling of your hybrid or cultivar.

New Bromeliad Taxon List : <http://botu07.bio.uu.nl/bcg/taxonList.php>

Refer to this site for latest species name changes and correct spelling.

Bromeliads in Australia (BinA) <http://bromeliad.org.au/>

Refer to this site for its Photo Index, Club Newsletters, Detective Derek Articles.

Keep these web sites set as desktop icons for quick reference access.

Novice Popular Vote

1st	Kevin Jones	<i>Aechmea fasciata</i>
2nd	Steve Davidson	<i>Goudeaea ospinae</i> var. <i>gruberi</i>
3rd	-----	-----

Open Popular Vote

1st	John Crawford	<i>Neoregelia</i> 'Highland Fling'
2nd	Marie Essery	<i>Guzmania</i> 'Limones'
2nd	Keryn Simpson	<i>Neoregelia</i> 'Lorena'
2nd	Dave Boudier	<i>Aechmea</i> 'Pink Panther'

Tillandsioideae

1st	John Crawford	<i>Tillandsia</i> 'Bob's Amigo'
2nd	Helen Clewett	<i>Tillandsia fasciculata</i> 'minor'
3rd	Keryn Simpson	<i>Tillandsia fasciculata</i>

Judges Choice

1st	John Crawford	<i>Tillandsia</i> 'Bob's Amigo'
-----	---------------	---------------------------------

Decorative

1st	Helen Clewett	'Towering Orthophytums'
-----	---------------	-------------------------

A Growers Comment:

It appears that your growers comments/hints have been very useful to many members who are entering their plants in the monthly Popular Vote competition. The quality of entries is high with a lot of entries gracing the show tables most months. Keep up the good work but remember there have been a lot of name changes recently so use the web links noted on p.15 to keep up-to-date.

However to keep this section of your Newsletter informative we need you the growers to tell us what you are doing to improve your growing. Information from others is very helpful but often adjustments are made to suit our own particular growing circumstances. What adjustments have you made ? The more info you offer the more helpful it will be to all growers, everywhere.

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.