

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

Edition: March 2026

Agenda: General Discussion

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

Study Group meets 2nd Saturday of each month  
Next meeting April 11th 2026 at 11 a.m.

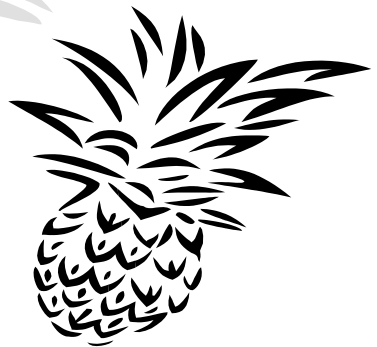
**Editorial Team:**

Ross Little

[pinegrovebromeliads@bigpond.com](mailto:pinegrovebromeliads@bigpond.com)

**Life Members:**

Gary McAteer, Coral McAteer, Debbie Smith,  
Shirley Smith, Ross Little, Helen Clewett,  
Keryn Simpson.



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## **Meeting February 14th 2026**

The meeting was opened at approximately 11.00 am  
The 8 members were welcomed.  
Five apologies were received.

## **General Business**

We welcome Jeanette Henwood back to our Group after a long break, hopefully you enjoy your time with us as we share knowledge and friendships.

Debbie and Shane reported on the necessary changes being made to our Group bank account. Both will be the dual profile as co-treasurers to replace Helen. We will receive an e-mail statement plus hard copy sent to our Wardell P.O. Box quarterly, Shane will maintain a spreadsheet of our financials.

A motion was passed that for all the work Ross does for the Group, supplying and maintaining the venue at no cost to the Group that he should not have to pay the meeting fee. All agreed.

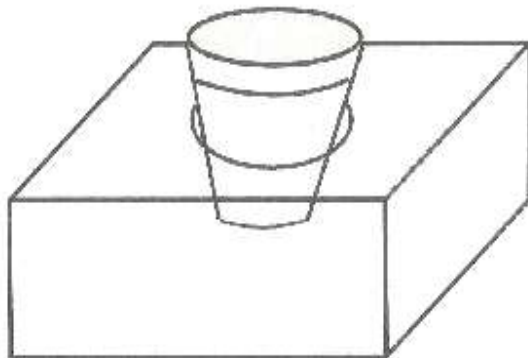
Shane advised of the passing of Gil Teague. Gil was a friend to many of us who collected Bromeliad books through Florilegium, his garden book store in Sydney.

## **Show, Tell and Ask!**

Last month we discussed using a 'decoy' pot for ease of rotating plants in the garden, BUT, what about for ease of transporting that special plant to a show.

"When transporting precious plants to meetings or shows use purpose designed carry trays which are easy to make, are very handy when you want to transport an awkward size plant to a meeting or a show without causing any damage.

Simply turn a polystyrene box upside down and cut a hole slightly larger than the



diameter of the base of the pot but smaller than the diameter of the top. Insert the pot into the hole so that it goes in about half of its depth and you will find the polystyrene will grip the sides of the pot and hold it firmly in place with the leaves clear of any other obstacles which could cause damage".

Polystyrene recycle tip by Neville Wood in our July 2013 Newsletter, page 14.

The 'decoy' pots in the garden are thought to be a good idea but some members suggested either putting some gravel in the bottom of the pot or dig the hole a bit deeper and put gravel under the pot for extra drainage would be beneficial.

Some Neoregelia hybrids were looked at for identification BUT it is often difficult to identify some hybrids, especially Neoregelias even though most parents pass on certain traits that do help guide one to possible identification. John Catlan often told us to get to know your species and their individual traits and you can often look at a hybrid and see the traits that have been passed on. This may then guide you toward a parent that can be entered into the BCR search box, check each result and you may identify your hybrid. John not only grew plants but he observed them noting their various traits. When considering hybridizing, having observed and noted the various traits, he would select plants with his desired traits to cross pollinate with rather than randomly splashing pollen about using the 'hit and hope' method.

Knowing what you may achieve by selective breeding is a good start.

## **Vriesea hieroglyphica on the Move! Believe It or Not**

by John Catlan

The flowers of *V. hieroglyphica* are like normal Vriesea flowers, one on either side of the bract stem. But when you are setting seed the bract is sweating an oily nectar which means you cannot use a felt pen to write on the flower bract so you use a plastic tag to write on and slip between the flower bract and flower bud. You have set seed, sit back and watch.

Every seed capsule, those with or without seed, start to move and each side moves 90° towards each other. They leave the flower bract in the original position and all your tags drop out. *V. hieroglyphica* is the only Vriesea I have noted that does this.

In the plant (*V. racinae* x *V. hieroglyphica*) only one side of the bract moves 90°, the other side is fixed. In other *V. hieroglyphica* crosses, a portion of the bract moves 45° leaving a portion of the bract with the capsules arranged at 90°.

You can use this to confirm which plants have *V. hieroglyphica* parents.

## **Vriesea fosteriana on the Move Too!**

Here the flowers move from right angle 90° to the bract stem downwards to 45° to the bract stem, just as the flowers open. Both green and red forms, also *V. 'Red Chestnut'* do this. The *V. fosteriana* hybrids only move half as much.

You can use this to confirm which plants have *V. fosteriana* parents.

Also the inflorescence is finely spotted, which is another trait it passes on.

**Catopsis** Grisebach, 13 Jan. 1864.

August Heinrich Rudolf Grisebach, 1814 - 1879, was a German botanist and phytogeographer. The type species for the genus designated by Grant & Zijlstra in 1998 is *Catopsis nitida* which was described by Hooker as a *Tillandsia* until reassigned to *Catopsis* by Grisebach.

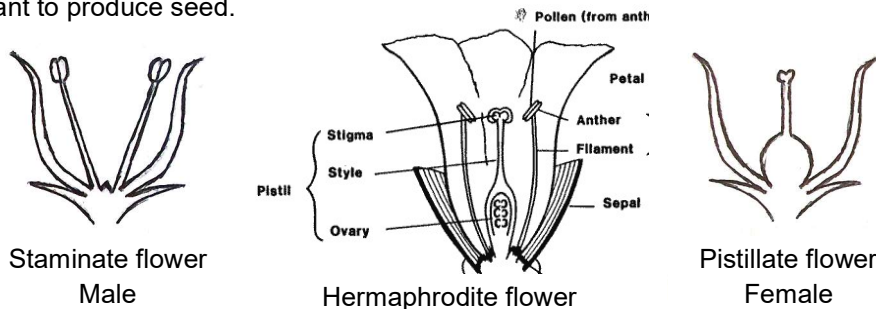
The genus *Catopsis* has 19 accepted species plus three varieties that can be found growing epiphytically from Central America and Antilles extending to southern North America (Mexico, Florida) and to northern South America and south eastern Brazil. They grow in moist, shady areas and in dry forested areas from sea level to over 2000 metres altitude.

They are really easy to grow, most requiring low to moderately bright light and will grow well mounted epiphytically or potted in a very free draining potting mix. They establish roots easily on cork bark mounts, driftwood and all materials we have previously discussed for mounting *Tillandsias* on.

A number of interesting plants were displayed by members, one being *Catopsis compacta* described as being almost carnivorous. The plant has a waxy coating on the inside of the leaves, which causes ants, insects etc. to slip and fall into the vase or tube to become part of the "soup" which is nutrition for the plants. It is found growing epiphytically in forests 400 - 2065 metres in altitude in southern Mexico and doesn't seem to like being too wet, it requires good light and air flow.

*Catopsis* are acaulescent (stemless), epiphytic, homoecious or functionally dioecious, monomorphic or dimorphic. Homoecious refers to a plant that produces only hermaphroditic (bisexual) flowers. Each individual flower on the plant contains both male (stamens/anthers) and female (carpels/pistils) reproductive parts. This is often referred to as "perfect" or "bisexual" flowers.

*Dioecious* flowers have male (stamens, the pollen bearing part only) and female (stigma only) flowers on different separate plants e.g. *Hechtia* (except *gayiorum*) and some *Catopsis*. A typical flower being hermaphrodite has both stigma and stamens in the same flower, whereas many *Catopsis* need a male and female plant to produce seed.



*Catopsis* 'Emily'  
grown by Shane Fitzgerald  
is a variegated sport of  
*Catopsis berteroniana*.



*Catopsis minimiflora*  
grown by Ross Little.

The type specimen of this species is from Chiapas, Mexico and was found by Werner Rauh in August 1974 at 1200 metres altitude and described by Professor Eizy Matuda in 1975.

This is one of the few *Catopsis* that has hermaphrodite flowers and it readily self sets seed.





*Catopsis subulata*



*Catopsis berteroniana*



*Catopsis compacta*



*Catopsis paniculata*



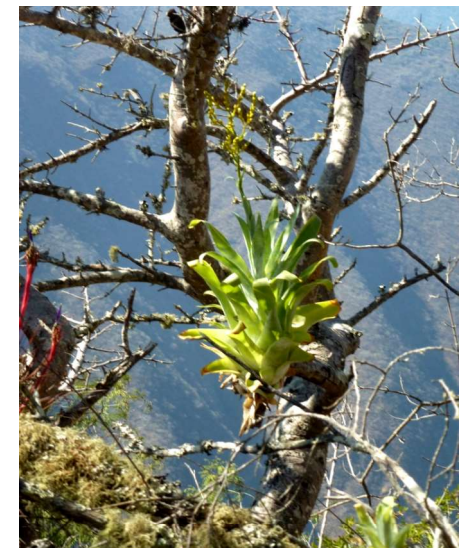
*Catopsis morreniana*

**Catopsis** is derived from Greek for “view” possibly because they grow on trees “looking down”.

These Catopsis photos taken in habitat in Mexico appear to be looking down from these trees and certainly have a view from the power lines.



Catopsis leaves are covered with a waxy, highly reflective cuticular powder that helps provide protection from the sun, take care when handling, it rubs off easily.





*Vriesea* 'Hunua Ranges'  
1st Open Michelle Hartwell



*Aechmea* 'Black Amazon' unreg  
grown by Shane Fitzgerald



*Vriesea* 'Maroochy Smooch'  
grown by Kayelene Guthrie



*Tillandsia tectorum* 1st Tillandsia Shane Fitzgerald



*Guzmania* 'Tricolor'  
Judges Choice Michelle Hartwell



*Tillandsia* 'Roy's Pride'  
Judges Choice Ross Little



*Orthophytum* 'Warana' grown by Jeanette Henwood



*Tillandsia bulbosa* — grown by Jeanette Henwood — *Vriesea correia-araujo*



*Billbergia* unknown  
grown by Kayelene Guthrie



*Tillandsia* 'Fuego'  
grown by Michelle Hartwell



*Billbergia* 'Showtime'  
grown by Keryn Simpson



*Edmundoa ambigua*  
grown by Jeanette Henwood



*Aechmea ramosa* var. *festiva*

### *Aechmea* 'Albo-vittata'

Keryn's *Aechmea fasciata* with whitish margined leaves has often been referred to as *Aechmea fasciata* var. *albomarginata*. *Albomarginata* is a descriptive term only so should not have been latinized.

### *Aechmea fasciata* (Lindley)

**Baker** by Derek Butcher is reprinted in part here from FNCBSG Newsletter July 2017 gave us the correct name for Keryn's plant as: *Aechmea* 'Albo-vittata'.



### *Aechmea fasciata* var. *flavi-vittata* Reitz, Sellowia 33:55. 1981

Leaves with longitudinal lines alternately green and yellow.

Type Brasil, Santa Catarina: Brusque, cultivated in the State of Rio de Janeiro, leg *J Pehnk s. n.* (15.2. 1981), Holotype HBR.



Again we read in 'Bromeliaceas' by Reitz 393-397. 1983 "The variety, so far, is only known by the type, from the interior of the forests of the State of Rio de Janeiro; collected in State of cultivation, in Brusque, Santa Catarina, by R. Reitz." This indicates it is rare in the wild but actively cultivated in Brazil and it seems strange that a plant with this name has been rarely quoted outside Brazil. According to REFLOA no further herbarium specimens have been lodged. In any event, variegated plants do not reproduce from seed and should be treated as cultivars. As such I will be adding *Aechmea* 'Flavi-vittata' to the BCR. Most variegations in cultivation have white stripes not yellow and we find reference to this in Seidel's Catalogue in 1976. Interestingly, they are not mentioned in DeLeon's article on variegates in Journal Brom Soc 35(1): 34-37. 1985. In fact nobody seems to have given them a proper cultivar name.

For want of a term I will use *Aechmea* 'Albo-vittata' which covers any with whitish stripes. Variegation is most likely to occur in cultivation via 'sporting' or mutation in seed raising so it's highly possible that this happened to one of the many infra-specific cultivars rather than a 'wild' species.

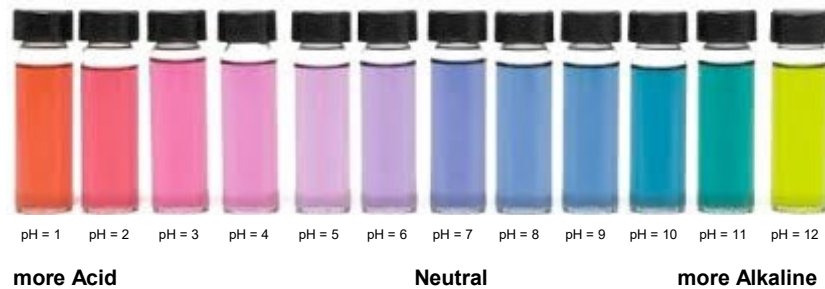
## Plants, Minerals and pH

by Les Higgins 2016

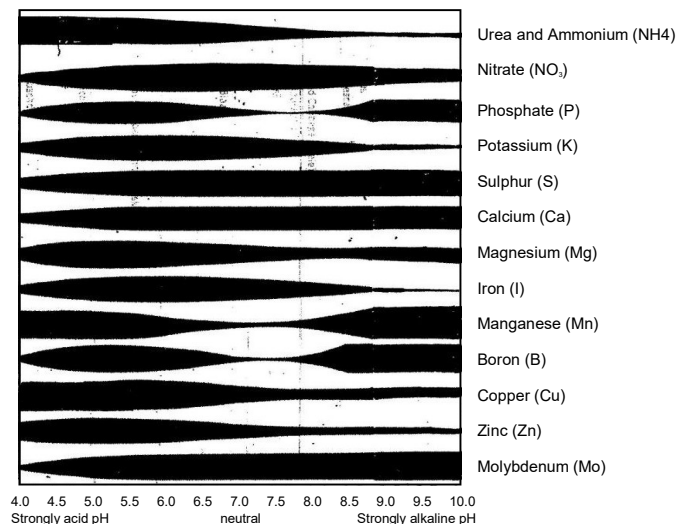
This is a basic article to be read in conjunction with [Atomic Structure of Plant Nutrient](#) that endeavours to give a scientific/technical explanation. (next month)

Rain water exits the clouds at neutral pH. As it falls through the air rain water combines with carbon dioxide to arrive on the N.S.W coastal farming village of Wardell at +5.0pH. Industrial cities and their surrounding areas experience 'Acid Rain' as a result of Sulphuric Acid contamination in the air. PineGrove Bromeliad Nursery bore water at Wardell is about pH 5. Tap water is universally considered to be pH 7, although its quality can be questionable.

### Red Cabbage pH Indicator



Soil pH dominates the growth of roots and micro organisms. The Australian Standards for Potting Mix stipulates a pH between 5.3 and 6.5. This is a suitable pH range for the majority of plants. 'Acid loving' plants e.g. Boronia thrive in pH4 and there are food crops that grow best at pH8.5. Fungi predominate in low pH whereas bacteria become more prevalent at higher pH values.



Liquids and solids applied to the plant can alter the pH of the potting mix.

This chart shows the degree of availability of nutrient elements at various substrate pH.

The numbers are logarithmic. (pH is the  $-\log [H^+]$ ). Each unit step is a multiple of ten.

A low pH favours the weathering of rocks and release of ions such as  $K^+$ ,  $Mg^{2+}$ ,  $Ca^{2+}$ ,  $Mn^{2+}$ . A reduction in soil pH increases the availability of the salts of: Carbonate, Phosphate and Sulphate.

In arid regions the weathering of rocks can increase the soil pH.

Last month Gloria reminisced of German Peat (pH 4). Today's potting mix could be composed of pine bark and sawdust (pH 4.5) soaked in iron sulphate (pH 3) to make bark tannins insoluble, coir that contains sodium and all composted with humectants (heat dried human sewage). Heed the hazard warning on every bag of potting mix and remember Sulphate combined with Sodium makes the plant killer Sodium-sulphate.

We have two potting mixes to examine by using a soil pH Test Kit.

**PineGrove Bromeliad Nursery Potting Mix** = pH 6 is made from: 50% 11 to 20mm seasoned pine bark + 40% sieved coal ash + 10% styrene. Although it sets rather hard a very credible root system develops around the perimeter of the substrate.

**Searles® Premium Potting Mix** = pH 5.6 with the bag's description as: Organic Compost, Peat and Zeolite. But what other substances does it contain?

Published formulae are not obliged to reveal all the ingredients nor their precise amount. Some manufactures understate the analysis to foil copying of their product. Two 'typical analysis' that declare a pH are:

**Seasol™** - the label description is "Complete Garden Health Treatment" and "THE SEAWEED SOLUTION". This is not a plant nutrient. Seasol™ has a pH of 10.5 with a Specific Gravity 1.05. The declared nutrient quantity is extensive but the small quantity is unlikely to total pH10.5. Seasol Company explained the high pH as "undisclosed amino acids and growth stimulants". (Just for the record Powerfeed™ a combining nutrient with Seasol™ is also pH10.5)

**Nutri-tech Black Gold™** - is a fusion fertilizer formulated for Biological Farming. Nutri-tech has a pH between 7 and 8 and Specific Gravity 1.32. (It's a black sludge) containing the powerful growth promotant — triacontanol. Non-Biological Farming with Black Gold requires at least the addition of nitrate, calcium and molasses.

The pH influences the anthocyanin pigments that give colour to bromelads. In periods of unpolluted (pH 5) rain many *Cryptanthus* hybrids take on a "red" hue for example *Cryptanthus* 'Ti' becomes *Cryptanthus* 'Red Ti', a phenotype not a genotype and reverts back to *Crypt.* 'Ti'. Plants totally without anthocyanins remain green regardless of pH.

Three simple methods to determine the approximate pH of soils, potting mixes, liquids and chemicals are:

1. **Bromothymol Blue:** for testing pH of fish tank water.
2. **Paper Indicator Strips:** e.g. Merck Universal indicator pH 0 - 14.
3. **Soil pH test kit comprising:** Universal Indicator and Barium Sulphate.

**Seaweed powder** = pH 7

By 1980 seaweed was known to have over 40 essential or beneficial elements. As the pH is high 1gram/1litre of water is the ideal maximum dilution.

**Diatomaceous Earth (DE)** = pH 7

This is a multiple insect killer effective for over 12 months. Incorporate into a potting mix at a minimum 150mg/Kg. Safe at a much higher dosage that seems to kill/deter earth worms.

**Mollasses** = pH 6

Source of soluble carbohydrate and trace elements. Use with fertilizers containing urea/ammonium to reduce carbohydrate loss in plants. Increases plant tolerance to hot and cold conditions. Helps plants with few chloroplasts (cream) to survive winter.

**Mono-Calcium-Phosphate** (Soft Rock Phosphate) = pH 7

A better choice than lime in a potting mix.

**Citric Acid** = pH 1

Plants release citric acid to facilitate Iron take-up. Use to lower pH

**Vinegar** = pH 2

Used to lower pH of liquids

**Bi-carbonate of soda** = pH 8

Used to raise the pH of liquid.

**Vinegar mixed with Bi-carbonate of soda makes CO<sub>2</sub>**

Useful in bags to stimulate plants in wilt condition.

The following are some of the chemicals that are used as plant nutrients and in fertilizers:

**Urea** = pH 5      N 46%

Plants must take-up urea whenever available. It makes big, soft growth.

Used at temperatures below 20°C it rots roots.

Urea added to herbicides increases efficacy.

**Calcium nitrate** = pH 5      Ca 24%, NO<sub>3</sub> 17%

Ca is number three in bromeliad nutrient. (K.N.Ca.Mg.P.S).

NO<sub>3</sub> is the natural form of nitrogen.

Foliar spray is the best way to apply ½ teaspoon/8L

**Magnesium Nitrate** = pH 7      M 9.48% N 10.54%

Plants absorb more Mg as Magnesium-nitrate than as Epsom Salt = pH 5.5

Green colour often intensifies and the yellow variation may reduce.

**Magnesium sulphate** (Epsom salt) = pH 5      Mg 9.48%, SO<sub>4</sub> 10.94%.

Applied singly as a foliar nutrient, ½ teaspoon/8L

**Potassium Nitrate** = pH 5      K 39%, NO<sub>3</sub> 14%

A ubiquitous chemical.

**Potassium Chloride** = pH 5

Chloride is not essential for Bromeliads. Use it to convert Sodium in coir into Sodium-chloride hopefully allowing the Sodium to be washed away as a saline solution.

**Mono Potassium phosphate** = pH 4.45      K 29%, P 23%

A valuable autumn/winter nutrient. Potassium looks after health while Phosphate induces maturity.

**Di-Potassium-Phosphate** = pH 9.0      K 45%, P 18%

Used to make a pH specific nutrient.

**Tri-Potassium-Phosphate** = pH 11.0      K 55.25%, P 14.59%

Insoluble but useful to stabilize pH in "In vitro"

**Potassium silica** = pH 12

Stiffens the sieve tubes reducing the possible entry of insect piercing and sucking mouthparts. Must be constantly applied to be effective, (every 2 weeks?)

**Iron Sulphate** = pH 3      Fe 36.77%, SO<sub>4</sub> 21.10%

Bromeliads use iron in greater amounts than most other plants. Excess use of Iron Chelates can result in Ethylenediaminetetracetic Acid (EDTA) within the plant migrating to calcium and manganese preventing their utilization.

**Manganese Sulphate** = pH 2

Lack of manganese results in an emerging white coloured leaf.

A recommended concentration is 1 atom to 1,000 nitrogen atoms

**Boron** = pH 9 (Borax)

This element is needed in the greatest amount of all trace elements.

A suggested concentration has a ratio of 2 Boron atoms to approximately 1,000 atoms of nitrogen however the availability of boron depends on pH. Plants that evolved on volcanic soil have higher requirements for boron than plants of sandy soil. Boron has the potential to make some self-sterile plants become self-fertile. Early experiments with Cryptanthus suggest boron stimulates flowering and offsetting. The pH chart reveals:

1. Boron at pH 9 becomes toxic.
2. Between pH 7- 8 Boron up-take is limited.
3. The best Boron absorption appears to be pH 5 to 6.

**Conclusion:** The pH range 5.0 to 7.0 is considered suitable for bromeliad growth. Good practice is to ascertain the pH before using a dilute liquid. pH determines how the plant uses minerals and other substances. pH, together with light and heat can influence the colour of many genera.

Disclaimer: pH numbers as per product tests performed on the meeting day.

## **Open Popular Vote**

|     |                   |                                     |
|-----|-------------------|-------------------------------------|
| 1st | Michelle Hartwell | <i>Vriesea</i> 'Hunua Ranges'       |
| 2nd | Shane Fitzgerald  | <i>Aechmea</i> 'Black Amazon' unreg |
| 3rd | Michelle Hartwell | <i>Guzmania</i> 'Tricolor'          |
| 3rd | Keryn Simpson     | <i>Aechmea</i> 'Albo-vittata'       |

## **Tillandsia**

|     |                  |                                 |
|-----|------------------|---------------------------------|
| 1st | Shane Fitzgerald | <i>Tillandsia tectorum</i>      |
| 2nd | Ross Little      | <i>Tillandsia</i> 'Roy's Pride' |
| 3rd | Jeanette Henwood | <i>Tillandsia bulbosa</i>       |

## **Judges Choice**

|     |                   |                                 |
|-----|-------------------|---------------------------------|
| 1st | Ross Little       | <i>Tillandsia</i> 'Roy's Pride' |
| 1st | Michelle Hartwell | <i>Guzmania</i> 'Tricolor'      |

### **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.

Bromeliad Species Database (BSD): [www.bsi.org/members/?bsd](http://www.bsi.org/members/?bsd)  
Refer to this site for species identification, photos, descriptions and more.

New Bromeliad Taxon List : <https://bromeliad.nl/taxonlist/>  
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 many with  
Table of Contents Index and there's Detective Derek Articles.

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

### **Where do I Find the Dates ?**

[www.bromeliad.org.au](http://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.