

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

Study Group meets the third Thursday of each month

Next meeting December 20th 2018 at 11 a.m.

Venue: PineGrove Bromeliad Nursery

114 Pine Street Wardell 2477

Phone (02) 6683 4188

Discussion: November 2018

General Discussion

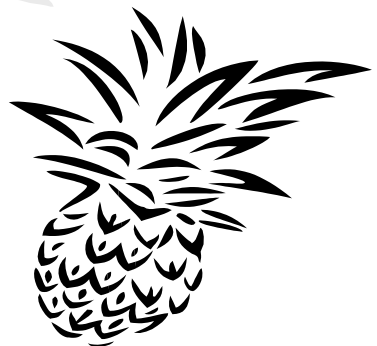
## **Editorial Team:**

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## Meeting 18th October 2018

The meeting was opened at approximately 11.00 am  
The 13 members present were welcomed.  
Four apologies were received.

### General Business

Ross apologised for not making the expected presentation of photos of Mexico. Perhaps they can be presented next month, weather permitting as A4 size photos and rain don't mix in our outdoor venue. Again there was talk of acquiring a T.V that would facilitate showing photos via a laptop which would enable us to more easily give power point type presentations.

Members are reminded that all Popular Vote shields must be returned by our November meeting. This is to enable the engraving of the Trophies and Shields for presentation at the December meeting which is our end of year Christmas party. It is assumed that we are all aware of what is required regards food and drinks, the Group will provide hot chickens, cold meats, bread rolls and soft drinks. Members are to provide a plate of accompaniments, NO alcohol.

This month it was noted that some of the Decorative displays are sliding a little too far away from the definition of the Rules, please try and conform:

- Embellishments are NOT to be the main focal point of the exhibit.
- The exhibit is to be about the plant/s with only a small embellishment.
- A plant in a plain pot isn't considered Decorative, at least add a ribbon tied off in a bow around the pot or place your pot in a decorative container.

Remember the magnificent displays that Warren created?

As he constructed works of art from simple plant material he spoke of harmony, contrast, progression and compatibility. With a wave of his hand Warren described the FLOW of his exhibit. Warren's presentations needed no ornaments. Warren's ability inspired all who saw his work. When exhibits can be described in Warren's words then a 'Decorative Display' has been achieved.  
(refer FNCBSG Newsletter October 2016, p.5).

Warren created some amazing floral displays of grand proportions right in front of us as we watched, however it is his smaller creations of 'Decorative Floral Art' that left a lasting impression also. It is this size and type of entry we are hoping to see grace our tables.

## Chores for the Month

No suggestions have been received telling us of various chores our readers have undertaken this month. However two questions from the meeting have saved this section from oblivion for this month.

**Question:** "What is a good time for fertilising plants?"

**Answer:** Any time during the growing period but there is a caveat: Nutrient must not be supplied to a plant in the way animals are fed. In nature animals gorge when food is available. For animals the problem is if or when is the next meal. Plant nutrient is subjugated by osmosis; the dilute always flows into the concentrate. An application of nutrient more concentrate than the plant's solute causes liquid to flow from the plant and death becomes a certainty. This law is absolute regardless of organic or inorganic substances. Nutrient should be very dilute and frequently applied.

**Question:** "What is the best time to take pups?"

**Answer:** Any plant that has a tendency for pups to abscise (Cryptanthus) should be left for a natural occurrence. The benefit is that abscission cells have formed to seal the break preventing the invasion of pathogens. Off-sets that don't abscise are actually not pups but branches. Rather than breaking-off use a sharp sterile knife to minimise the damaged area. It is considered that a branch one third the size of the original plant is a suitable size. Best time for removal is at the start of the growing season.

Seasonal light and heat is now intensifying to a point that some Bromeliads can be burnt. This often seems to happen mid Spring in the NSW Northern Rivers area which is why most growers who moved plants out into full Winter sun should have moved them back into shadier positions by now or risk sunburn. For those growers wishing to establish plants into permanent full sun positions it is a little too late to begin the process safely now due to the intensity of the sun. This task is best performed in winter or very early Spring allowing the plants time to acclimatize or one risks sunburn. Full sun being unobstructed sunshine from early morning to late afternoon. It is often found that severely burnt plants will pup and it is these pups that can acclimatize and survive the harsh summer sun more readily. It is for this reason that we often see 'old mother plants' planted into these harsher situations, they often multi pup forming clumps and hopefully acclimatize readily also. To help combat summer scorching keep moisture up to your plants, watering during the day does help by reducing the temperature and raises the humidity in the growing area. Give plants a good soaking to keep the roots moist. Be mindful that water left lying on leaf surfaces can cause burn as the sun's rays magnify through the water droplets.

## Show, Tell and Ask!

Ross again challenged members to identify several plants. He showed plants of wrong name that had been used for hybridising leading to dubious progeny names. We often hear people asking for plant identifications resulting in discussions regarding doubtful parentage, this is because some hybridisers don't like to give up their parentage secrets.

The term 'Grex' was discussed. When species are cross pollinated the resulting F1 seedlings have reasonable consistency. 'Reasonable' as collectively a grex is the offspring of a given cross from one seed pod, however one grain of pollen equals one seed and there may be many seed per pod. Whenever two hybrids are used for breeding the ancestral genetic code creates an extreme selection of size, shape and colour and there can be varying shades of each colour. Hybrid cross hybrid is referred to as a complex hybrid giving many varied seedlings. Rather than attempt to give every variant a specific name should a group of seedlings/grex be given a Grex name?

"Having one set of ICNCP rules to follow should make life simple. How they are interpreted is up to each of the 84 odd plant Groups to decide. The BSI decided to toe the line in 1998 with the published Bromeliad Cultivar Register (BCR) where selection was the key word. Growers were asked to follow these rules but it is voluntary, some prominent nurserymen just ignore it but still allot names. I had hoped that BSI affiliated Societies would have been more active in encouraging more participation in the BCR but alas." Derek Butcher

Sticking to the present set of Rules/Guidelines would be best and easier for us all however as we know this is not going to happen when \$\$\$ driven hybridisers are involved. If the present system were followed to the letter, heavy culling would occur saving only the best. Naming would only happen when sufficient numbers of an individual plant are available and the name is carried on rather than in the event of death the name is lost into non-existence. We often see a "name" given to a select plant and the rest sold under formula or no name at all. At least with a formula, one has a starting point if one considers their purchased plant is worthy of a name. Check the BCR and hopefully get a match, check with the breeder for approval to add a suitable descriptive name and register the name with the BCR.

The first edition of the ICNCP rules was agreed upon in 1952 in Wageningen and published in 1953, the ninth (most recent) edition was published in 2016. William Stearn has outlined the origins of ICNCP, tracing it back to the International Horticultural Congress of Brussels in 1864, when a letter from Alphonse de Candolle to Edouard Morren was tabled. This set out de Candolle's view that

Latin names should be reserved for species and varieties found in the wild, with non-Latin or "fancy" names used for garden forms. Karl Koch supported this position at the 1865 International Botanical and Horticultural Congress and at the 1866 International Botanical Congress, where he suggested that future congresses should deal with nomenclatural matters. De Candolle, who had a legal background, drew up the Lois de la Nomenclature botanique (rules of botanical nomenclature). When adopted by the International Botanical Congress of Paris in 1867, this became the first version of today's International Code of Nomenclature for algae, fungi, and plants (ICN).

Plants shown by Ross were *Aechmea* 'Brillig' with its red banded foliage and yellow petals. ►

*Canistrum triangulare* - found in Brazil and named for its narrow triangular leaves. ▼



An exhibit in a net pot aroused considerable interest in net pots. One member even volunteered to visit the manufacturer, Port Pots, to obtain supplies. Les intends to give a brief talk on this subject in coming months.

John brought in a head of *Ananas* 'Pom Pom', it was a mass of small offsets that members were invited to guess how many there were in total, with a prize being offered to the closest guess. John also showed how to remove some of the offsets which he shared around. (photo p.8, how many do you think it has ??)

John also showed two Tillandsias mounted on dressed Juniper wood. This creates speculation as to the suitability of types of wood for epiphyte mounts. A reasonable assumption is a tree that naturally hosts various epiphytes makes a suitable mount. Trees with deciduous bark enables the tree to discard epiphytes. When damage exposes the true wood of a deciduous bark tree it is invariably invaded by epiphytes. Unsuitable wood prevents any chance of roots forming on the epiphyte.

Each month John brings in something to improve our knowledge. Following last month's request by Les for advice on *Neoregelia pendula* X *eleutheropetala* John brought in several of those plants. It was a revelation to see how off-sets varied from the parent and that dissimilar off-sets materialize into the desirable structure. Trish also demonstrated the progressive nature of this plant. This co-operation makes for harmony within our Group and helps us all to learn.



The unusual flower spike of *Billbergia viridiflora* was passed around. The plants were grown from seed collected by John many years ago.

***Billbergia viridiflora*** H. Wendl. Allg. Gartenz. 22:154. 1854;  
Mart. Fl. Bras. 3, pt. 3:424. 1892.



**Distribution:** Epiphytic and saxicolous, from near sea level to 150 m alt; southern Mexico, Belize, Guatemala and British Honduras.

Leaves green often marked with cross bands on the back.

The scape is suberect to arching and about equalling the leaves.

The inflorescence is simple and laxly racemose.

Pedicels up to 5cm long.

The sepals and petals are green.

The mature fruit is orange.

### ***Billbergia alfonsi-joannis***

Reitz, Anais Herb. Barbosa Rodrigues 4:31, pl. 9. 1952.

**Etymology:** Homage to the brothers, Priest Cônego João Reitz (n. 1904) and Priest Alfonso Reitz (n. 1906), eminent admirers and growers of ornamental plants, part founders of the Herbário Barbosa Rodrigues, headquartered in Itajai.

**Distribution:** Epiphytic in forest, 700 m alt, known from the type locality only: 16 Dec. 1950, Reitz 4069 (HBR, US), incomplete and not altogether certain.

*Billbergia alfonsi-joannis* was discovered and described by Padre Raulino Reitz who named it to honour his brothers. As with many of the helicoid Billbergias they have very large scape bracts forming an umbrella over the pendant spike. Referred to as a helicoid or watch spring Billbergia because of its tightly recoiled petals. When grown in cultivation is found to be difficult to pollinate rarely if ever offering fertile seed.

Being an epiphyte it grows on the trunks and branches of trees and like most Billbergias its inflorescence is relatively short lived popping out to full bloom over night. The bracts gradually wither away in just a few short days in our scorching early summer heat, oh! but what a magical sight to behold, we are so fortunate.



photo taken at PineGrove Bromeliad Nursery by Ross Little



**Vriesea 'Dark Knight'**  
1st Open and Judges Choice  
John Crawford



**Vriesea 'White Lighting' x 'Megan'**  
1st Novice Steve Davidson



**Neoregelia 'Baker's Tiger'**  
shown by Keryn Simpson



**Guzmania unknown hybrid**  
shown by Dave Boudier



**Tillandsia inopinata**  
1st Tillandsioideae John Crawford



**'It's Raining, It's Pouring.....'**  
1st Decorative John Crawford



**Aechmea 'MEND'**  
shown by Sue Mackay-Davidson



**Tillandsia floribunda**  
shown by Helen Clewett



**Guessing competition by John.**  
How many pups on this 'Pom Pom' ?



**'Our Tillandsia Log'**  
by Dave Boudier



**'Our Favourites'**  
by Keryn Simpson



**Tillandsia stricta**  
shown by Trish Kelly

## A Little Bromeliad History - Part 4

sourced by Helen Clewett

From **The Gardener's Magazine of Botany, Horticulture, Floriculture and Natural Sciences** edited by **Thomas Moore and William Ayres**, 3 volumes were produced in London in 1850-1851. In the first volume are plates of some bromeliad species very often portrayed in those days, namely *Aechmea fulgens* and *Vriesea splendens*. There has once been made an inventory of coloured plates from *Vriesea splendens* published in the 19th century, counting at least 10 (Lecoufle 1967). Moore, a curator of the Chelsea botanic gardens, has also been editor of *The Gardener's Chronicle* and **The Floral Magazine**; the latter magazine was illustrated with 1022 lithographed plates in the two series published from 1861-1881.

**Refugium Botanicum** was published by **William Wilson Saunders**, botanist and horticulturist. From 1869-1873 there were 5 volumes, each in 3 parts with in total 360 plates by Fitch (both drawing and lithography). Each plate is only partially coloured.

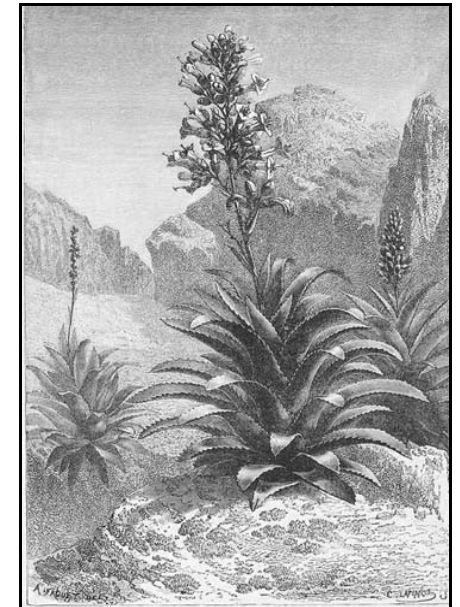


Plate of: *Hohenbergia legrelliana*

by Heinrich Reichenbach. There are 6 bromeliads illustrated in this series work. The plate of *Hohenbergia legrelliana* Baker shows the illustration technique used. No derivation of the species name is given by Baker in his description; in his *Handbook of the Bromeliaceae* from 1889 it is listed as *Ortgiesia legrelleana*. Most probably the species honors Belgian Mrs. Legrelle born d'Hanis who cultivated the bromeliads sent by her brother from exotic places. Saunders received the plant from the European continent, but lost all further history of it. This species had already been described in 1856 by German botanist Klotzsch under the name *Macrochordion recurvatum* and has also been classified as a *Billbergia* and a *Portea* before ending up as *Aechmea recurvata*. It is a plant from southern Brasil and adjacent areas of bordering countries, usually growing as an epiphyte.

**Below left:** plate 138 of vol. 2 of Elizabeth Twining: "Illustrations of the natural orders of plants" (London, vol.1-2, 1868), with *Ananas comosus*, *Aechmea fulgens*, *Cryptanthus zonatus* and some details (seed, flower, fruit) of other bromeliads.

**Below right:** plate in vol. 27 (1885) of "The Garden - An illustrated weekly journal of horticulture in all its branches", with *Aechmea paniculata*, a species known only from the type collection and described in Ruiz & Pavon's *Flora Peruviana et Chilensis* (see chapter on Spain). This engraving had been published already in 1870 in the French journal "Le Tour du Monde - Nouveau journal des voyages".



There were more publications in 19th century England and Scotland with the occasional icon of a bromeliad; from a reference book on botanical illustrations (Nissen 1966) I selected some titles:

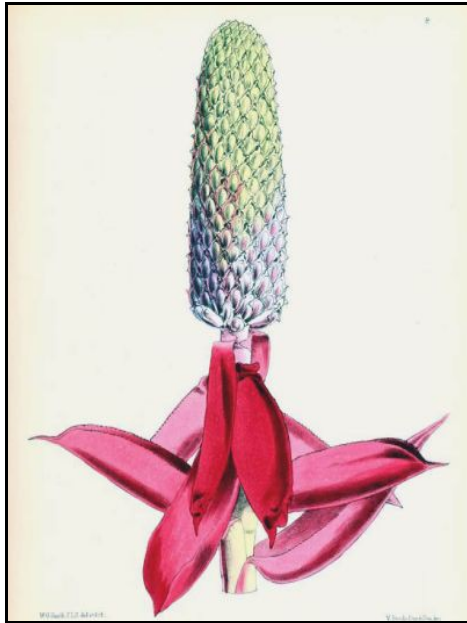
**Botanist's Repository**, for new and rare plants, volume 1-10 1797-1814 London, with 664 coloured plates; drawings, engravings and text by **Henry C. Andrews**.

**The Paradisus Londinensis**, volume 1-2 1805-1808 London, with 117 coloured plates drawn by **William Hooker**, text by **Richard Salisbury**.

**Collectanea botanica**, or figures and botanical illustrations of rare and curious exotic plants, London 1821, with 40 coloured engravings, text by **John Lindley**.

**The Floral Cabinet and Magazine of exotic botany**, volume 1-3 1837-1840 London, with 138 chromolithographs, conducted by **George B. Knowles and Frederic Westcott**.

**The Garden - An illustrated weekly journal of horticulture in all its branches** 1872-1927 London, founded by **William Robinson**.  
**The Floral Magazine**, volume 1-10 1861-1871 and New Series 1872-1881 ('vol.11-20') London, with 1040 chromolithographs, conducted by **Thomas Moore** and later **Henry Dombrain** and others. In it were at least eight bromeliads, two of them are depicted below.



*Aechmea mariae-reginae*



*Billbergia saundersii*

#### Literature cited:

**Lecoufle, M.** (1967). Early illustrations of *Vriesea splendens* in horticultural periodicals. *Journal of the Bromeliad Society* vol.17(3):64-65.

**Luther, H.E.** (1995). Misnamed bromeliads, No.15: *Aechmea smithiorum*. *Journal of the Bromeliad Society* 45:26.

**Nissen, C.** (1966). Die botanische Buchillustration, ihre Geschichte und Bibliographie. 2nd ed. Verlag Hiersemann, Stuttgart, Germany.

**de Paula, C.C. and Guarçoni, E.** (2007). *Neoglaziovia variegata*: a fiber producing Brazilian bromeliad. *Journal of the Bromeliad Society* 57:119-120.

**Read, R.** (1986). *Icones Bromeliacearum II*: Curtis's Botanical Magazine. *Journal of the Bromeliad Society* 36:152-153.

***Tillandsia stricta*** Solander ex Ker-Gawler.  
 Drawing S. Edwards, engraving F. Sansom.  
 Curtis's Botanical Magazine vol.37 plate 1529 (1813).

***Guzmania virescens*** (Hooker) Mez.  
 Published as ***Puya virescens*** Hooker. Drawing and lithography W. Fitch.  
 Curtis's Botanical Magazine vol.83 plate 4991 (1857).

***Aechmea smithiorum*** Mez.  
 Published as ***Aechmea lavandulacea*** C.H. Wright. Drawing and lithography W. Fitch. Curtis's Botanical Magazine vol.131 plate 8005 (1905).

***Neoglaziovia concolor*** C. H. Wright.  
 Drawing and lithography W. Fitch.  
 Curtis's Botanical Magazine vol.136 plate 8348 (1910).

***Billbergia iridifolia*** (Nees & Martius) Lindley.  
 Drawing Mrs. Withers.  
 The Botanical Register vol.13 plate 1068 (1827).

***Tillandsia utriculata*** Linnaeus.  
 Published as ***Tillandsia flexuosa* var. *pallida*** Lindley. Drawing M. Hart.  
 Engraving S. Watts. The Botanical Register vol.9 plate 749 (1823).

***Pitcairnia heterophylla*** (Lindley) Beer.  
 Published as ***Puya heterophylla*** Lindley. Drawing Miss Drake.  
 Lithography G. Barclay. Edwards's Botanical Register vol.26 plate 71 (1840).

***Pitcairnia staminea*** Loddiges.  
 Drawing G. Loddiges, engraving G. Cooke.  
 The Botanical Cabinet vol.8 plate 722 (1823).

***Tillandsia flexuosa*** Swartz.  
 Published as ***Tillandsia aloifolia*** Hooker. Engraving J. Swan.  
 Exotic Flora vol.3 plate 205 (1827).

***Tillandsia aeranthes*** (Loiseleur) L.B. Smith.  
 Published as ***Tillandsia stricta*** sensu Lindley.  
 Drawing and lithography S. Holden. Paxton's Magazine of Botany and register of flowering plants vol.15 page 125 (1849).

***Ochagavia carnea*** (Beer) L.B. Smith & Looser.  
 Published as ***Bromelia longifolia*** sensu Lindley. Drawing W.H. Fitch.  
 Paxton's Flower Garden vol.2 plate 70 (Baines ed. 1883).

***Aechmea recurvata*** (Klotzsch) L.B. Smith.  
 Published as ***Hohenbergia legrelliana*** Baker. Drawing and lithography W.H. Fitch, Refugium Botanicum vol.4 plate 285 (1871).

## **Bromeliad Leaf Forms**

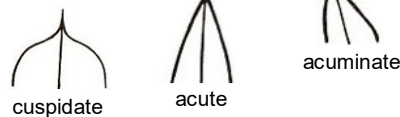
by David Longley

Bromeliad leaves can be divided into two basic types...those with spines and those without. Those with spines belong to the subfamilies Pitcairnioideae and Bromelioideae, while those without belong to the subfamily Tillandsioideae. An exception to this rule is a plant like *Pitcairnia heterophylla*, which displays two distinct leaf forms. One is green and entirely spineless and the other is brown and wickedly thorny. Another interesting thing about this plant is that in the winter months it sheds its green leaves and blooms, while retaining its thorny brown leaves.

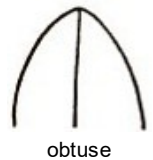
All Bromeliads have scales or trichomes, as they are properly termed. In the genus *Tillandsia*, the leaves are generally totally covered with trichomes. Again we find exceptions to this rule. These scales play an important part in the plant's survival in that they are able to absorb moisture from the air. They can also tell us how much light the plant is able to tolerate. The scurfy-leaved *Tillandsias* can tolerate more light than those of the waxy leafed types. This is also an indication as to where they may be found in habitat. The waxy-leaved types will more often be found lower down on the tree trunk in a shaded environment and the scurfy types higher up in the tree branches in bright light.

The form and size of the leaves are extremely varied, from grass-like leaves to wide strap-shaped leaves. In *Tillandsia duratii* we find the leaves coiled around tree branches in an effort to support itself. In general, however, Bromeliad leaves are alike in that they usually have a blade and a sheath. The following is a list of some of the terms used in describing leaf forms and characteristics.

acantha	As in a leaf that is quickly narrowed to a point.
acuminata	Tapered to a long narrow point.
acute	Ending in a sharp point, sides nearly straight; angle formed by leaf tip less than 90 degrees. The opposite of obtuse.
angustifolia	Having narrow leaves.
armed	Having defenses such as thorns, spines or barbs.
attenuate	Narrowing to a thin, slender point.
barbed	Having short, stiff, hooked bristles.
brachyphylla	Having short leaves.
carcharodon	With shark-like teeth.
chaetophyl]a	With bristle-like leaves.
coriaceous	Leathery.
crenate	With margins that are cut into rounded scallops.
cuspidate	Tipped with a sharp, ridged spine.
deciduous	Referring to plants that lose their leaves at the end of their growing period.



dimorphus	Refers to a plant having two distinctly different types of leaves, such as many pitcairnia.
entire	Refers to leaves with smooth edges and no indentations.
filifolia	Having thread-like foliage.
flagelliformis	With whip-like leaves.
glabrous	Smooth, glossy, without hairs.
heterophylla	Having leaves of more than one shape.
induplicate	With margins folded inwardly.
iridifolia	With iris-like leaves.
juncea	Looking like a reed, as of the leaves.
laccatus	Looking as if lacquered.
laevis	Smooth, polished-like surface.
latifolia	Broad leaf.
leaf blade	The upper portion of the leaf, above the leaf sheath.
leaf sheath	The lower portion of the leaf; that portion that is attached to the growing axis. The wider, basal portion of a leaf.
leptosepalus	Thin, slender-leaved.
ligulate	Strap-shaped. (also called lingulate).
longifolius	Long-leaved.
macrophylla	Large-leaved.
oblique	Slanting, having unequal sides.
obtuse	Blunt; angle formed at leaf tip greater than 90 degrees. The opposite of acute.
patula	Spread out, broad, flat.
phyllum	Leaf.
platyphylla	Having wide leaves.
polymorphic	With several distinct forms, particularly variation within a species.
pungens	Having a sharp, stiff point.
recurvata	Having recurved leaves.
retorted	Directed backwards or bent back (retroverse).
retuse	The obtuse apex of a leaf, having a slight notch.
serrata	With teeth like a saw, sharp teeth pointing forward.
sinuate	Wavy; having leaves with wavy margins.
streptophylla	Twisted leaves.
tenuifolia	Finely leafed; having slender leaves.
trichome	The scales on the leaves of Bromeliads that are capable of absorbing moisture and transferring it to the plant tissue.
tricophylla	Hairy-leaved.
undulate	Wavy, having a wavy margin or surface.
unifoliate	One leaf.



Reprinted from the Newsletter of the Bromeliad Study Group of Northern California, April, 1980.



## **Novice Popular Vote**

1st	Steve Davidson	<i>Vriesea</i> 'White Lighting' x 'Megan'
2nd	Sue Mackay-Davidson	<i>Aechmea</i> 'MEND'
3rd	-----	-----

## **Open Popular Vote**

1st	John Crawford	<i>Vriesea</i> 'Dark Knight'
2nd	Keryn Simpson	<i>Neoregelia</i> 'Baker's Tiger'
3rd	Dave Boudier	<i>Guzmania</i> unknown hybrid

## **Tillandsioideae**

1st	John Crawford	<i>Tillandsia inopinata</i>
2nd	Trish Kelly	<i>Tillandsia stricta</i>
3rd	Helen Clewett	<i>Tillandsia floribunda</i>

## **Decorative**

1st	John Crawford	'It's Raining, It's Pouring'
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## **Judges Choice**

1st	John Crawford	<i>Vriesea</i> 'Dark Knight'
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### **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.

### **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.