

#### **BROMELETTER**

THE OFFICIAL JOURNAL OF THE BROMELIAD SOCIETY OF AUSTRALIA INC.

bromeliad.org.au

ISSN 2208-0465 (Online)

Vol 56 No 2 - March/April 2018.



#### **REMINDER:** Next meeting 17th March; George Bell Pavillion



BROMELETTER is published bi-monthly at Sydney by The Bromeliad Society of Australia Incorporated.

Deadlines for articles:15th of February, April, June, August,
October and December, To allow for publishing in the first
week of March, May, July,
September, November and January.

#### **CONTENTS**

| Management Details  | 2,3,11,19,22,23 |
|---|-----------------|
| Plant Of The Month, Margaret Draddy Artistic Comp - January           | 4,5             |
| Breeding/ Hybridising for variegation - Ross Little FNCBSG Nov Part 1 | 6,7             |
| 2017 Financial Report   | 8               |
| Variegation Explained post by Lloyd Goodman / Club Champions          | 9,10            |
| Xylella Fastidiosa (or why we can't import Bromeliads into Australia) | 12,13           |
| What to do when your trunk gets too tall                              | 13              |
| Murphy's Law DAFF Bungle  | 14              |
| Breeding/ Hybridising for variegation - Ross Little FNCBSG Dec Part 2 | 15              |
| January Meeting - Discussion  | 16              |
| Plant Of The Month, Margaret Draddy Artistic Comp - February          | 17,18           |
| February Meeting - Discussions  | 20,21           |

| <u>COMMITTEE</u>              |   |
|-------------------------------|---|
| lan Hook                      | 0408 202 269  |
| (president @bromeliad.org.au) |   |
| Kerry McNicol                 | 0439 998 049  |
| (membsec@bromeliad.org.au)    |   |
| Meryl Thomas                  | 0401 040 762  |
| Carolyn Bunnell               | 02 9649 5762  |
| Alan Mathew                   | 0403 806 636  |
| Charlie Moraza                | 0413 440 677  |
| Helga Nitschke                | 0447 955 562  |
| Patricia Sharpley             | 0439 672 826  |
| Bob Sharpley                  | 0409 361 778  |
| Joy Clark                     | 02 4572 3545  |
| John Noonan                   | 02 9627 5704  |
|                               | Ian Hook (president @bromeliad.org.au) Kerry McNicol (membsec@bromeliad.org.au) Meryl Thomas Carolyn Bunnell Alan Mathew Charlie Moraza Helga Nitschke Patricia Sharpley Bob Sharpley Joy Clark |

#### BROMELIAD SOCIETIES AFFILIATED WITH THE BROMELIAD SOCIETY OF AUSTRALIA INC.

Bromeliad Society of Victoria.

The Secretary, P.O. Box 101, Darling. Vic. 3145

Caboolture & Districts Brom. Society Inc.,

The Secretary, P.O. Box 748, Caboolture Qld. 4510.

Cairns Bromeliad Society Inc.

The Secretary, P.O. Box 28, Cairns. Qld. 4870

Gold Coast Succulent & Brom. Society

The Secretary, P.O. Box 452, Helensvale Plaza Qld. 4212.

The Hunter Bromeliad Society Inc.,

C/- Ron Brown 59 Barton St, Mayfield. NSW 2304.

Townsville Bromeliad Study Group,

C/- Barb Davies, 5 Sharp St, MT LOUISA. Qld 4814.

NT Bromeliad Society Inc

C/- Ross Hutton, PO Box 36283, Winnellie. NT 0821

<u>Material for Bromeletter</u> – address to: **editor@bromeliad.org.au** All other correspondence to:

The Secretary, Bromeliad Society of Australia Inc., P.O. Box 340, RYDE NSW 2112.

Cover:

*Neo.* Dr Jeffrey Block Photo Kerry McNicol

#### **Life Members:**

Grace Goode O.A.M Eugene Morris Ruby Ryde Bill Morris Ron Farrugia Graham McFarlane Ian Hook

#### **OFFICE BEARERS**

Book Sales & Librarian Ian Hook

Member Secretary & Purchasing Officer Kerry McNicol

Catering Helga Nitschke; Lydia Hope

Raffle Sales Peter Fitzgerald

Pots, Labels etc Sales Ron Farrugia
Plant of the Month / Show Registrar Terence Davis

Show Co-ordinator/s Ian Hook / Terence Davis

Show Display Joy Clark
Publicity Officer Di Tulloch

#### Treasurer's Report

Treasurer Alan Mathew gave the following details

Operating Account to <u>December 31, 2017:</u>

 Opening cash at bank
 \$ 29 562.99

 Income:
 1 388.20

 Expenses
 879.11

 Bank Statement as at December 31,2017
 \$ 30 072.08

Operating Account to January 31, 2018:

Don't for-

get a mug

 Opening cash at bank
 \$ 30 072.08

 Income:
 1 405.65

 Expenses
 2 003.88

 Closing cash at bank January 31, 2018
 \$ 29 473.85

#### **WEBSITES**

Bromeliads in Australia http://bromeliad.org.au Encyc of Bromeliads http://encyclopedia.florapix.nl/

BSI Cultivar Register http://registry.bsi.org/ Florida Council of Bromeliad Societies http://fcbs.org/

Bromeliario Imperialis http://imperialia.com.br/

Facebook users: search for the group 'Planet Bromeliad' & associated 'Planets & Moons' sub-groups for Bromeliad Enthusiasts.

\*Annual subscriptions are now overdue, see details on p 15

\*All meetings are on the 2nd Saturday of each month,

**EXCEPT March which will be the 3rd Saturday:** 

Speaker – Cancer Council

In the George Bell Pavillion Castle Hill Showgrounds.

\* BROMELIAD SOCIETY of AUSTRALIA Autumn Show 14th 15th April

=3rd

#### Plant of the Month Competition January 2018

| <u>Open</u> | <u>Judge's Choice.</u>            |                     |
|-------------|-----------------------------------|---------------------|
| 1st         | Till. 'Blue Moon'                 | Kerry McNicol       |
| 2nd         | Crypt. 'Misty Glen'               | Ron Farrugia        |
| 3rd         | × Sincoregelia 'Gallactic Warrior | Lydia Hope          |
| <u>Open</u> | Members' Choice                   |                     |
| 1st         | Till. edithae                     | Bruce Munro         |
| 2nd         | x Sincoregelia 'Gallactic Warrior | Lydia Hope          |
| =3rd        | Catopsis subulata                 | <i>Ron Farrugia</i> |
| =3rd        | Till 'Leiboldiana Median"         | Carolyn Bunnell     |

Till 'Blue Moon'





Top Left: T. Blue Moon Top Right: xSincoregelia **Gallactic Warrior** 

Below: Cryptanthus Misty Glen





Catopsis subulata

Far Right:

Right:

T. Leiboldiana Median



Kerry McNicol



#### Plant of the Month Competition January 2018 cont.

NoviceJudge's Choice1stTill confertifloraCarole Taylor2ndNeo. 'Wild Rabbit'Elizabeth Mudriczki3rdNeo. 'Mini Skirt'Elizabeth Mudriczki

Novice Members' Choice

1st Neo. 'Mini Skirt' Elizabeth Mudriczki 2nd Ortho. gurkenii Warril Evans 3rd Neo. 'Wild Rabbit' Elizabeth Mudriczki

#### Margaret Draddy Artistic Competition.

1st Pauline Blanch Countess Tillandsia







Clockwise from top left: Till conferiflora Neo. 'Mini Skirt' Countess Tillandsia Orthphytum gurkenii Neo. 'Wild Rabbit'





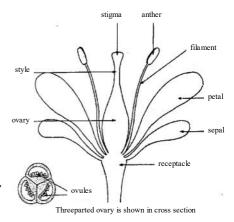
#### **Breeding / Hybridising for Variegation Part 1**

compiled by Ross Little (FNBSG Nov 2017)

A recently asked question: "How do you get seed and make variegated hybrids".

The cross pollination of two plants is quite a simple process, basically one takes the pollen from the anthers of one plant and places it on the stigma of another and waits for seed to mature, which can take from several months to a year or so for some species and hybrids.

For some people hybridising is a matter of being opportunistic, whatever is in flower at the time will suffice rather than pollinating for a specific purpose. This can be said for many seed growers who I consider are, "opportunistic seed growers", those who randomly collect seed and grow it, these people are not the hybridiser only a seed

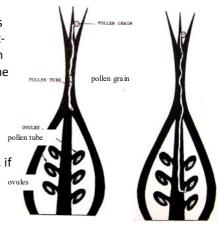


grower. Often it's these cases that have "parent unknown" on the label too, but not always as hybridisers can be a secretive bunch.

A discerning hybridiser is one who sets out to create something different, to improve on a plants appearance, colour, shape, size or they breed for cold or heat tolerance, in other words a hybridiser has an end goal in mind, not just hit and hope. A good hybridiser is one that is selective as to what plant/s are cross pollinated with each other, crossing and back crossing until they achieve that end goal. Parental assurance is important too so pollinating is done in a controlled environment rather than randomly in a shade house risking contamination.

To be sure who the pollen parent is (dad), the anthers of the seed parent to-be (mum), should be emasculated (cut off) prior to the opening of the anthers (pollen bearing part of the flower). This is done just in case the flower is self compatible (will accept its own pollen). Label each flower as it is pollinated, don't leave it to memory especially if using several fathers onto the same plant.

Once a grain of pollen has been placed on the stigma, if receptive (appears sticky), a pollen tube will begin to develop and grow down the style to the ovary and contact the ovules delivering the sperm, eventually developing into a seed.



We have now begun to understand the process of pollination, but, to achieve a variegated hybrid, first one must use a mother plant (seed parent) known to be a transmitter of the variegated genes. Often these are a variegated *Neoregelia carolinae* type. Here in Australia the most consistent transmitters used are variegated forms of *Neo*. 'Meyendorffii' and *Neo*. 'Mother' and progeny of it.

One must now be thoughtful in their fathering process and what desired traits are wishing to be passed on before randomly splashing pollen on everything.

If it's cross banding you are after, add pollen of *Neo. zonata*, 'Skotaks Tiger' or 'Hannibal Lector' to your variegated mother (seed) plant **NOT** the reverse.

Using the larger Neoregelias as father like *Neo*. 'Great White', *Neo. pascoaliana* or *Neo. silvomontana* onto a variegated mother will often give large variegated progeny.

If it is stolons you're after use *Neo. pauciflora*, *Neo. ampullacea*, *Neo. lilliputiana* or *Neo.* 'Fireball' pollen onto your variegated mother plant, these will produce mini to medium sized progeny.

Another consideration once you have achieved variegation, try using a spineless plant as a pollen parent (dad) like *Neo*. 'Medusa' onto your known transmitter or even onto one of your own creations. Hopefully some of the resultant seedlings will be spineless and variegated. Pushing your boundaries further try using a spineless *Aechmea fasciata* to experiment with and enjoy the results.

Don't forget culling is important as not everything you produce is perfect, keep only the best, most distinctive progeny and **toss the rest**.

Good record keeping on your label as well as in a book is important also, it will help in analysing your results later and assist in further breeding programs one may wish to undertake. Records are also a big help with your BCR registration.

An answer to the question: "Is your hybridising really necessary? Think Twice!"



The two plants pictured here from the same grex are the result of cross-

Neo. 'Ladd's Gem'
with Neo. 'Great White'
by Ross Little.
The only two variegates retained
from the grex.

(grex: the resultant progeny of a given cross)



## **BROMELIAD FAIR**



#### Hundreds of exotic bromeliads from beautiful to bizarre

Rare and unusual Tillandsias, colourful Neos and Guzmanias, spectacular Vrieseas, dazzling Aechmeas...

**Broms for all tastes!** 

## Saturday/Sunday, April 28/29, 2018

Saturday 10 a.m. - 4 p.m. Sunday 9 a.m. - 12 midday

You will find us at:



## Concord Senior Citizens Centre: 9-11 Wellbank Street,

Concord, NSW 2137

Free entry – and bring a box

EFTPOS - Visa, Mastercard, debit cards
Books and fertilizer for bromeliads also available

For more information please contact:

Garry Flemming – 0265539868 / 0413178884

Peter Tristram – ptristra@biapond.net.au

## Variegation Explained

Facebook Posting on Planet Tillandsia Ionantha, 28th. August, 2017
Photos & post by: **Lloyd Godman** 

Geoff lawn noted 'I have never read of bromeliad variegation explained in these terms before--maybe a suitable article for Bromeletter? It seems the retired Dr.

Benzing is still mentally active. David Benzing wrote that time 'The Biology of Bromeliads' in

1980, as well as many other publications. '

'Incredibly beautiful, I got this variegated Tillandsia ionantha the other day - I asked David Benzing for his ideas on variegation - here is his response:

'What you've dug up on the internet is a



good example of how bad it's content can be. What's claimed that's true is poorly presented, only half true or flat out incorrect. Here's what I can add that might help.

First, I've got to admit that I'm not an authority when it comes to plant pathology or leaf variegation. It's true that the genetic changes that underlie leaf variegations can be spontaneous or induced by a variety of external agents, including ionizing radiation, viruses, mutagenic chemicals, and heat shock. Viruses are ubiquitous of course-even bacteria have them! Their replication always involves

disruptive change in the host's g-nome.

Bromeliads, being *monocots* (single leaf emerges from the seed) possess two kinds of meristems, whose constituent embryonic stem cells are vulnerable to alteration by all of the agents just identified. In addition to the apical meristem that all plants possess (woody plants also have a cambium that causes stems and roots to become thick and woody) monocots have *intercalary meristems* located at the base of each leaf and this meristem produces the leaf blade in linear fashion, nothing more, whereas the *apical meristem* located at the apex of every shoot and root is responsible for the growth of those entire organ systems (shoots and roots respectively). Being non-woody, most monocots lack meristem number three, the cambium.



Leaf variegations occur when patches of stems cells within an intercalary meristem possess mutations that block chlorophyll synthesis (or development of the chloroplasts themselves) within those cells rendering them and the cells derived from them, non- green. I don't think it's accurate to describe bromeliads as unusually prone to such mutations. It is true that leaf variegations within certain bromeliads are quite unstable, their patterns even shifting from leaf to leaf in a single plant. Such instability can have several causes, viruses for example or

simply because the genes that regulate chlorophyll synthesis are unstable in certain genotypes. But such conditions are to my knowledge no more common in Bromeliaceae than in many other families.

It certainly is possible by the way that the progeny from a single mother plant (its seeds) may include the rare variegated individual. The condition of this individual may result because it has a different father, the mother receiving pollen from more than one plant, or that seed may have experienced a *spontaneous mutation* that affected the biosynthetic pathway that mediates chlorophyll synthesis, or simply because it is the possessor of the rare homozygous condition that pops up should the defective chlorophyll synthesis gene be recessive and rare in the subject population's gene pool.

phyll versus *anthocyanins* (the violet to red pigments) are totally independent genetically, the synthesis of these two classes of pigments being entirely separate. This is why greenwhite variegations usually exhibit the usual suffusions of pink displayed by non-variegated close relatives.

Finally, variegated plants are more common in horticulture than nature in part, at least, because being less photosynthetically

competent than their non-variegated relatives, the former are less fit in nature and more vulnerable to elimination by natural selection. "



#### Club Champions 2017

Club Champions for 2017 are as follows:

Novice: Bruce Munro

Open: Carolyn Bunnell (no photo as per Carolyn's request)

Margaret Drady Artístíc: Carolyn Bunnell.

Congratulations to our champions. Bruce has only been growing for a few years but maintains his plants to a very high standard. Carolyn, as usual, grows plants of such a high standard, to which most of us can only aspire.



| BROMELIAD SOCIETY of AUSTRALIA INC.  2017 FINANCIAL REPORT (Extract only)  Profit & Loss Statement for year ending 31st December 2017 |                   |                   |  |
|---|-------------------|-------------------|--|
| Profit & Loss Statement for year ending 31st Decem  | 2017              | 2016              |  |
| Revenue   |                   | 2020              |  |
| Membership Fees   | \$ 5113           | \$ 3 040          |  |
| Sales   | \$ 16 130         | \$ 16 614         |  |
| Other   | \$ 5320           | \$ 4586           |  |
| Bank Interest   | \$ 1909           | \$ 1817           |  |
| Total Revenue   | \$ 28 469         | \$ 26 057         |  |
| Expenses  |                   |                   |  |
| Purchases   | \$ 4126           | \$ 4340           |  |
| Administration Expenses   | \$ 4903           | \$ 4070           |  |
| Other   | \$ 11 277         | <u>\$ 12 871</u>  |  |
| Total Expenses  | \$ 20 306         | \$ 21 281         |  |
| SURPLUS/(LOSS) FOR YEAR   | \$ 8163           | \$ 4776           |  |
| Accumulated Funds 1 January   | \$118 017         | \$113 241         |  |
| ACCUMULATED FUND 31 DECEMBER  | \$126 180         | \$118 017         |  |
| BALANCE SHEET AS AT 31 DECEMBER 2017 CURRENT ASSETS   |                   |                   |  |
| Cash Assets   | \$ 30 680         | \$ 36 368         |  |
| Inventory   | \$ 3597           | \$ 4277           |  |
| Investments   | \$ 91 410         | \$ 74 504         |  |
| Other   | \$ 420            | <u>\$ 1722</u>    |  |
| TOTAL CURRENT ASSETS  | \$126 107         | \$ 116 871        |  |
| NON CURRENT ASSETS  |                   |                   |  |
| Plant & Equipment   | \$ 756            | \$ 1146           |  |
| Other   | <u>\$ 0</u>       | <u>\$ 0</u>       |  |
| TOTAL NON CURRENT ASSETS  | <u>\$ 756</u>     | <u>\$ 1146</u>    |  |
| TOTAL ASSETS  | <u>\$ 126 836</u> | <u>\$ 118 017</u> |  |
| CURRENT LIABILITIES   |                   |                   |  |
| Creditors & Borrowing   | \$ 683            | \$ 0              |  |
| Other   | <u>\$ 0</u>       | <u>\$ 0</u>       |  |
| TOTAL CURRENT LIABILITIES   | <u>\$ 683</u>     | <u>\$ 0</u>       |  |
| NETT ASSETS   | <u>\$ 126 180</u> | <u>\$ 118 017</u> |  |
| EQUITY  |                   |                   |  |
| ACCUMULATED FUNDS   | <u>\$ 126 108</u> | <u>\$ 118 017</u> |  |
|   |                   |                   |  |

#### Xylella Fastidiosa

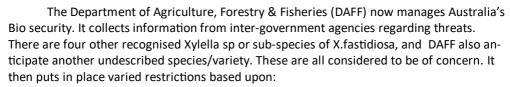
#### Or the reason we can no longer Import Bromeliads into Australia

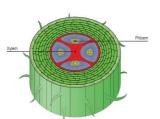
(Compiled from various sources; *many thanks* to Chris Larson upon whose research this article is based; DAFF website; BBC GCSe Bitesize –Xylem & Phloem)

Xylella is an invasive bacterial plant pathogen that causes significant environmental and economic impacts. It presents as scorched leaves, browning and loss of leaves, stunted shoots, reduced fruit size, dieback and/or death of the plant. It is spread by sucking insects moving from infected plants to other species. It is NOT yet present in Australia, it is, however, a major concern for Australia's plant industry as many commercial and ornamental plant species can be killed by this bacterial pathogen.

Depending on the host plant species, the disease is known by a range of common names, including:

- Anaheim disease (in grapevine)
- California vine disease (in grapevine)
- dwarf (in lucerne)
- leaf scald (in plum)
- leaf scorch (in coffee, almond, blueberry, oleander, elm, oak, plane, mulberry, maple)
- phony disease (in peach)
- Pierce's disease (in grapevine)
- variegated chlorosis (in citrus)





- Countries with a record of Xylella fastidiosa
- •Plant families with known associations with *X.fastidiosa*.
- •Possibly other things.

What is it? Xylella is a bacterium that lives in the water & nutrient conducting vessels (xylem) of plants. It is transmitted by xylem feeding insects such as leafhoppers and spittlebugs. Resulting in the stoppage of water flow by blocking the vessels causing sections of the plant to die.

It was discovered in 1892 in California. Recent outbreaks have occurred in Italy in 2013 severely infecting olive plantations. In 2015 it was found to effect oleander and acacias in Europe, leading to DAFF having concerns. The basis for DAFF's Tillandsia alert and resultant bromeliad import restrictions stemmed from *Xylella* DNA being found **ON** *T.usneoides* imported into Europe from Costa Rica, **NOT** in the xylem. Also a study of Xyllela (2003 & 2005) in infected citrus orchards in Texas found Xylella DNA on the outside of *T.usneoides* (on the foliar trichomes), it is thought, after decaying matter had dropped on the tillandsia leaves,



but none were found to be infected. These studies show no evidence that *T.usneoides* has been infected growing/hanging in these orchards.



The disease cannot live outside of the Xylem. No Xylella has been found in any Bromeliad genus.

#### **DAFFs Import Requirements**

- All parent stock must be tested in country of origin.
- Then those plants must be quarantined for at least 12 months.
- Pups or cuttings taken from the tested plants must all be tested again for *X.fastidiosa* prior to export Note: No bromeliad has <u>ever</u> tested positive to infection by *X.fastidiosa* by these tests to which they will be subjected.

Bromeliads are the only family where the only association is the DNA found on the external parts, ie where no member of the family has been found to be infected. Therefore bromeliads are the only family that has been subjected to these onerous measures, where there is no scientific evidence that they are susceptible to such an infection.

We certainly do not want this insidious disease in our country, and if Bromeliads were proven to be 'carriers' of the bacteria we should have no problem with these restrictions. However, DAFF use 'the use as a consumable product' to exclude citrus products from their harsh restrictions, to allow imports from the Americas, where many of the nurseries that we would like to import from are located! This is also very baffling as there has been no public information about dealing with bio waste from citrus imports, which regularly go on the compost heap. Even if the specified use is termed "a consumable product" the practical effect is otherwise.

#### Where To From Here With Bromeliads

- Depends if DAFF accepts that the science behind their actions is inconclusive at best.
- Or if DAFF realize that their protocols go far beyond those in place in any other country including NZ.
- If the relevant xylella species are found in either bromeliads, or in previously xylella free countries, the situation may get worse.

#### Leggy Plants!

Some slower growing bromeliads can get a very long 'trunk as the lower leaves die off. Neo. Shelldance is a slow grower for me & takes years to flower. Pups are prolific and grow up & down the trunk. Once the plant is too long, the trunk can be cut, in this case above the pups forming but below roots on trunk( roots not necessary to successfully replant top ). It could also be cut further up the trunk if you wish to replant. This plant was 'discarded' as the lower pup bearing trunk would easily replace the mother many times over.





#### Murphy's Law of Bromeliads. (Re-printed many times before)

In the beginning there were the Universal Laws - principles that attempted to define some aspects of reality. But soon man realised the errors of his ways and people like Edsel Murphy began to write laws which reflect the real world. A world dominated not by nature, but by inanimate objects and capricious human behaviour. Below are a few "Laws" by Murphy and his friends as they applied to bromeliads:-

Murphy's Law: The limb always falls on the most perfect bromeliad the day before a show. Buttered Side Down Law: Any plant knocked from a shelf will fall so as to do the most possible damage to itself and all the plants below it.

Hybridizer's Hypothesis: The most undesirable traits of the parents always manifest themselves in the hybrid, 2 years later.

Tsk Tsk Laws: No matter what your bromeliads do, there is always someone who knew they would.

Green Thumb Postulate: Experience gained is directly proportional to bromeliads ruined.

Show Chairman's Law: Nothing is impossible for the person who doesn't have to do it.

Parkinson's Law: Bromeliad collections expand to exceed the space available.

Placement Principle: Placement chairmen always place show plants with the fault in the most visible place.

Phyllotron Law: Under the most rigorously controlled conditions of light, temperature and humidity, the bromeliad will do as it damn well pleases.

This article has appeared in many Journals and Newsletters over the years.

#### **Irreplaceable Plant Specimens Destroyed!**

Kerry Straight (ABC News)

'A review of Australia's quarantine procedures has been undertaken after historic and valuable plant specimens from France were destroyed by biosecurity officers. In March 2017, a collection of rare flowering plants sent by the Museum of Natural History in Paris, to Queensland's herbarium in Brisbane, were incinerated!

Michelle Waycott, who chairs the Council of Heads of Australian Herbaria, said the pressed plant specimens dated back to the mid-1800s."They were the first type specimens collected of a species," she said. "That would be equivalent of material collected in the Flinders expedition . . . being destroyed - literally irreplaceable collections of high historic and scientific value." Ms Waycott said it was the second similar incident in a matter of weeks.

It is understood that a collection of lichen specimens from New Zealand's Allan Herbarium, destined for the Australian National Herbarium in Canberra, was also recently destroyed by biosecurity officers. "New Zealand herbaria have now banned sending any specimens to Australia," said Ms Waycott. She said the French herbarium was also 'very unhappy' with the loss of their collection.

It is common practice for herbaria around the world to swap material to help identify and understand plant species. "We rely on sharing specimens from all over the world to be able to do our science, so it may have a major impact on our ability to do our research. The fact that it happened twice in the space of a couple of weeks, and that they were two separate ports, two separate entry points, has us very concerned."

The Federal Department of Agriculture and Water Resources, which controls biosecurity, declined request for an interview.

Editor's Note: Following up this story, DAFF investigated and admitted that the specimens should not have been destroyed. The specimens arrived without the correct paperwork, requests were made to both the sender & receiver for correct paperwork, which was again, incomplete. After a further delay in receiving the correct paperwork, the specimens were eventually destroyed.

#### **Breeding / Hybridising for Variegation** Part 2

compiled by Ross Little (FNBSG Dec,2017)

Graeme Barclay from New Zealand being one of our **Eagle-eyed Observers** has offered some additional tips on what traits to look for when selecting a plant to breed with:- to be the seed bearing plant (mother).

"This info used to be a 'secret' but is now widely shared by all on Face Book etc. It's what everyone wants to know!.. To get variegated hybrid seedlings, generally a **striated** (*striped, marked with longitudinal lines*) mother plant must always be used. These often also have striated sepals supporting the flowers (look closely when blooming) which in turn also means the striation extends down into the ovary. Therefore, seed and the forthcoming seedlings from such a plant will often have



a reasonable percentage of variegates, but also a number of plain green and albino seed-lings (the white albinos will die). The variegates can then be selected and grown on, some will be striated too, but many will develop stable central or marginated variegation, which is normally the hybridizer's goal.



If you start with using a *medio-variegate* (centre of the leaf is white) as the seed mother, you will normally get ALL green seedlings and NO variegates. If you start with an albo-marignated seed mother (white on

leaf margins), you will normally get ALL albino seedlings and a few green seedlings, and NO variegates, so these options



should generally not be attempted.

The secret is to start with a striated-sepal mother plant and test its transmitting properties to the seedlings".

Before you set out on your creative exercise of hybridising give some serious thought about what you want to achieve. Be sure what you have in mind may give a distinctly different result to what is already available, if your creation will just blend in with the myriad of other look-a-likes then change your direction. A great new hybrid is one that will always be distinctive from any others. Don't be an **opportunistic hybridiser:** a person who can't help themselves, have flower must tickle it, with no real regards to the end result and must keep everything. If your hybridising is all about "**getting your name up in lights"** make sure all the effort is worth it and will be something sort after for many, many years to come.

Only name and register the very best with the BCR, cull the rest.

#### Meeting Discussion - January 2018

Kerry McNicol: what to do with a leggy plant! See p13.

<u>Alan Beard</u> also co-incidentally brought in a plant which had grown a tall trunk, flowered and was now growing pups along the length of the trunk. His was *Neoregleia* Burnsie's Spiral, a plant which also takes a few years to flower, developing the tall trunk. The same could be done to this plant.

<u>Pamela Munro</u> requested identification of a stoloniferous midi neoregelia which had suffered in the heat so she had potted a couple of pups. We believe the plants were probably *Neoregelia camorimeana*. She was also wondering what would be best for a Neo. Purple Grape which had thrown



two pups, one on a reasonably lengthy stolon, the other on a short stolon



growing close to the mother and being cramped by it. It was suggested that she remove the closer pup as close as possible to the parent, but leave the further one on to form a small colony, which always looks impressive.



**Bruce Munro** was questioning the correct naming on two plants, both of which had a name but with a question mark. The plants were in flower so could easily be identified and, happily, the names were correct. Both tillandsias, *T. hondurensis* & *T. harrissii*.





**Ron Farrugia** returned the seed he was asked to raise quite a few years ago, as good sized seedlings of *Pitcairnia heterophylla*. A reasonably rare plant which is the only deciduous bromeliad. It has long strappy leaves (to 60cm) typical of pitcairnias, but then sheds them in autumn, leaving only prickle type 'leaves' similar to that of cactus. In spring it flowers as a cluster of pink to red or

white petals appearing at the end of a short

stalk. Care is needed not to over-water the plant in winter as it is basically dormant.

<u>Terry Davis</u> showed us an example of each of three different coloured flower spikes of *T. straminea*. Pale, mid and dark lilac /purple.



#### Plant of the Month Competition February 2018

#### Open Judge's Choice.

1st Neoregelia 'Wally' Carolyn Bunnell
2nd Neoregelia 'Blushing Zebra' Carolyn Bunnell
3rd Tillandsia 'Samantha' Ron Farrugia

#### Open Members' Choice

1st Tillandsia 'Samantha' Ron Farrugia
2nd Neoregelia 'Wally' Carolyn Bunnell
3rd Tillandsia 'Tropiflora' Ron Farrugia



Neoregelia 'Wally'



Neoregelia 'Blushing Zebra'







#### Plant of the Month Competition February 2018 cont.

#### Judge's Choice

**Novice** Elizabeth Mudriczki 1st Deuterocohnia brevifolia Neoregelia 'Lorena Lector' Eli Tillandsia brachycaulos Co <u>Members' Choice</u> 2nd Elizabeth Mudriczki 3rd Carol Taylor

**Novice** 

Neoregelia 'Lorena Lector' 1st Elizabeth Mudriczki Deuterocohnia brevifolia Elizabeth Mudriczki 2nd 3rd Tillandsia brachycaulos Carol Taylor

#### Margaret Draddy Artistic Competition.

1st 'Weird but Wonderful' Pauline Blanch





Deuterocohnia brevifolia

Neoregelia 'Lorena Lector'

#### Tillandsia brachycaulos



'Weird but Wonderful'





We continue to attract new members into the Society and would like to welcome our most recent enthusiasts:

## Harold Kuan, Garry Hackett, Annette Dewling, Carol Hudson, and also the return of Gladys Arizabaleta

If you would like to become a Member, please see details below.

#### MEMBERSHIP APPLICATION:

ANNUAL SUBSCRIPTION: Renewal is due 1st January for membership

year January to December.

Annual Membership:

Overseas Membership:

Australia

A\$25

Asia/Pacific Zone

A\$40.

Rest of the World

A\$45.

New Membership requires a \$5 joining fee, plus Annual Subscription. (Those joining after our spring Show are covered for the following year.)

Note: Un-financial members must add \$5 rejoining fee when re-applying for membership.

Members will become 'un-financial' if renewals have not been received by the end of our Autumn Show

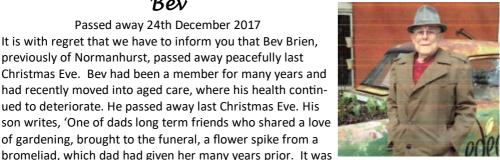
## MAIL ORDER PAYMENTS BY MASTERCARD/VISA. (Subject to A\$10.00 minimum.)

Members using Mastercard or Visa mail order facility should provide the following details, printed clearly in block letters, on a separate sheet of paper:

- Name and address of MEMBER.
- TYPE of card (Visa, Mastercard)
- CARDHOLDER name details, as shown on card.
- Mastercard/Visa number and expiry date.
- CARDHOLDER signature (essential).
- Payment details (membership renewal, book purchase, postage, etc.)
   with \$A amounts for each item.
- A 3% surcharge for this service will be made.

## Vale - Beverley Edward James Brien

Passed away 24th December 2017 It is with regret that we have to inform you that Bev Brien, previously of Normanhurst, passed away peacefully last Christmas Eve. Bey had been a member for many years and had recently moved into aged care, where his health continued to deteriorate. He passed away last Christmas Eve. His son writes, 'One of dads long term friends who shared a love of gardening, brought to the funeral, a flower spike from a



the perfect touch to see dad buried with this symbol of what brought him so much joy over many years. Those who knew Bev are saddened at his loss.

### Vale - Sylvía Plever

1925 - 2018

The much loved wife of bromeliad expert **Herb Plever** passed away in January after a short battle with illness. We know of herb through his endeavours (for 56 years) to spread knowledge & news of Bromeliads across the world. She was his biggest supporter and in his own words a 'fair critic' if things needed attention. Our thoughts are with Herb at this sad time.

#### **Meeting Discussion - February 2018**

Thank You, Werner Raff for another, very informative 'Beginning with Broms' talk. We all learn a little more every time we go back to basics. A few tips will be in the next Bromeletter. Terry Davis & Kerry McNicol continued in this vein with a short seed-sowing demonstration (details p 21) with free Quesnelia "Farro" seeds for all those who wish to try their hand. Pamela Munro asked about droopy damaged lower leaves of her plants. All leaf axils need to have water in them to in an effort to keep leaves in good condition. There is always some decay of lower leaves if optimum conditions aren't met, as the plant protects the newer growth.

John Schembri gave us a couple of tips he has found useful in his his garden. Firstly, don't throw away handles of old/broken rakes/ brooms, use them to make extended handles for your hand tools so there is a little less bending. Also you can 'grease' your hand-held water gun if it gets a little stiff using a silicon or lanolin spray into the works which will resist the water longer than water soluble sprays.



#### **February Meeting Discussion (continued)**

**Harold Kuan** asked Ian last meeting about potting mix. Both he and Ian brought in their recipes and samples of the mixes they use. Much discussion ensued proving that if you asked a hundred growers about potting mix recipes, you will get a hundred different answers.

#### **Collecting, Preparing & Raising Seed**



1 Seed is ripe & ready to collect when the pods protrude from the flower head and easily come away from the stem.

2 Collect pods and store in an airtight jar in a cool dark place (the vegetable crisper, perhaps) When ready sow, gently squeeze the pods (seed will be in a gel substance) dropping the seed into water, wash the gel from the seed.

3 Ensure all gel is off the seed as this will inhibit germination. Rub gently to remove stubborn gel.

4 Drain Dry on paper towel



5 Use a small soldering iron or grinder to make holes in the bottom of a food storage box



6 Two-thirds fill the box with a well-draining mix. Sprinkle seed over the top. Lightly cover with coco-peat (coir). Mist with a spray bottle, put lid on and keep in a

warm, bright, but shaded area.

Ensure the seed doesn't dry out, misting as necessary.

In a few weeks you should see tiny green dots appearing. Your seed is growing!



#### **LITERATURE** for Sale

http://www.bromeliad.org.au/Contacts/BSALibrarian.htm

| TITLE   | AUTHOR            | PRICE   |
|---|-------------------|---------|
| Bromeliads for the Contemporary Garden        | Andrew Steens     | \$20.00 |
| Bromeliads: A Cultural Manual (Rev. ed. 2007) | BSI               | \$ 6.00 |
| Bromeliad Hybrids 1: Neoregelias              | Margaret Paterson | \$25.00 |
| Bromeliads Under the Mango Tree               | John Catlan       | \$10.00 |
| Bromeliad Cultivation Notes                   | Lyn Hudson        | \$10.00 |

**Growing Bromeliads— 3rd Ed. by BSA** is out of stock. Reprinting negotiations are under way. *Watch this space!* 



#### **SEED BANK**

Thanks goes to all those who have donated seed.

Seeds cost 50¢ per packet for Members and Seed Bank supporters (plus postage) or \$1 per packet (plus postage) for all other enquiries:

Enquiries for seeds should be directed to

## Terry Davis (02) 9636 6114 or 0439 343 809

Below is the list of **some** of the <u>most recently</u> added seed to our Seed Bank. For a full list please go to <u>bromeliad.org.au</u>

| Tillandsia tricolor  | 02/11/17 | Terry D  | avis        |
|--|----------|----------|-------------|
| Tillandsia pohliana  | 11/11/17 | Terry D  | avis        |
| T. variabilis  | 17/11/17 | john Ol  | sen         |
| T. lolliacea   | 24/11/17 | Greg Ai  | zelwood     |
| Dyckia 'Little Red Devil' selfed, almost black, white spines |          | Jan 2018 | Terry Davis |
| Tillandsia pauciflora small form                             | 22/01/18 | Terry D  | avis        |
| Neo. kautskyi  | Jan 2018 | Terry D  | avis        |
| Ques. Farro  | 22/01/18 | Kerry N  | 1cNicol     |
|  |          | _        |             |

Seed has been moving quickly, especially the more recent additions.

SO if you have seed to donate please send it in or bring it to our next meeting.

#### What's ON

<u>10th February</u> - BSA Meeting - Castle Hill Showground Federation Pavilion. Sales from 11.00a.m. Meeting 12noon

<u>17th March</u> - (3rd Saturday) BSA Meeting - Castle Hill Showground Federation Pavilion. Sales from 11.00a.m. Meeting 12noon

7/8th April - Collectors plant Fair - Clarendon Racecourse, Clarendon NSW

28/29 April Bromeliad Fair - Concord Senior Citizens Centre 10-4 Sat, 9-12 Sun

14th / 15th April \* BROMELIAD SOCIETY of AUSTRALIA Autumn Show (no meeting this month)

#### COLLECTORS' CORNER

BROMELIADS – a large colourful range of Bromeliads, both species and hybrids of many genera. Includes a very large range of Tillandsias. A mail order list of Tillandsias is available upon request.

We also specialize in orchids, cacti, succulents, hoyas, bonsai and carnivorous plants, PLUS gems, fossils, natural history, books and much MORE!



810 Springvale Rd., Braeside VIC 3195

PH: 03 9798 5845, FAX: 03 9706 3339 E-MAIL: sales@collectorscorner.com.au WEBSITE: <u>www.collectorscorner.com.au</u> Open 9am-5pm 7 days a week.

## M. J. PATERSON 212 Sandy Creek Road, GYMPIE QLD 4570

A Large Range of Bromeliads For Sale, especially our own hybrid Neoregelias, Tillandsias, Cryptanthus and Vrieseas Do call in if you are up this way.

#### But, please, phone first.

Phone/Fax: (07) 5482 3308.

E-mail: wm\_paterson@bigpond.com Also available

Bromeliad Hybrids. "For My Own Satisfaction" Book 1.

Neos. "For My Own Satisfaction"

Book 2. Crypt., Til., Vr., etc. Books available on-line at www.bromeliad-hybrids.com

#### MIDHURST BROMELIAD NURSERY

Specialist Growers of Tillandsias and Other Genera.

Hard grown to suit all Australian conditions.

Wholesale and Mail Order only.

WRITE FOR FREE PRICE LISTS OF TILLANDSIA
AND OTHER GENERA TO:

P.O. Box 612,

Hurstbridge, Vic. 3099 Phone: (03) 9718 2887. Fax: (03) 9718 2760

E-mail: mossy@melbpc.org.au

#### **FOREST DRIVE NURSERY**

**Prop: Peter Tristram.** 

C/- P.O. BOX 2, BONVILLE NSW, 2441

(a few miles south of Coffs Harbor.)

Specialising in SPECIES and VARIEGATES from mostly imported stock.

TILLANDSIAS to titillate the most discerning fanciers.

Beautiful VRIESEAS (including 'silver' species).

GUZMANIAS, AECHMEAS, NEOREGELIAS, etc.

Visitors welcome—phone first: (02) 6655 4130 A.H.

Send S.A.E. for MAIL ORDER list of quality plants.

# POSTAGE POSTAGE



## PRINT POST PP246537/00007

PAID