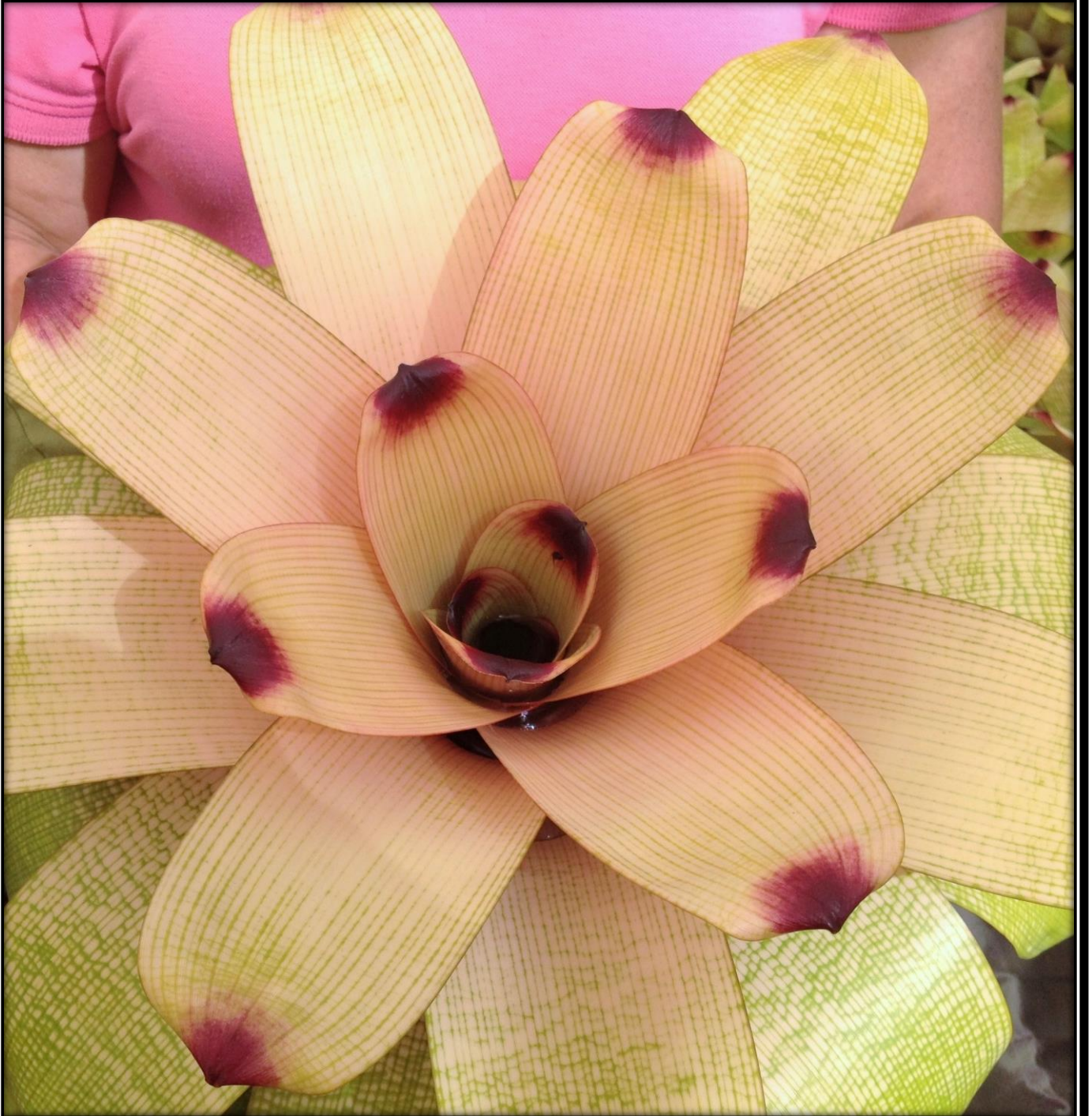


# *Bromeliaceae*



VOLUME XLIX

Third Quarter 2015



# The Bromeliad Society of Queensland Inc.

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**MONTHLY MEETINGS** OF THE Society are held on the 3<sup>rd</sup> Thursday of each month except for December, at the Uniting Hall, 52 Merthyr Road, New Farm, Brisbane, commencing 7:30 pm.

**ANNUAL GENERAL MEETING** is held immediately before the February General Meeting

Front Cover: *Vriesea* 'Love Bite'

By: M. Cameron

Rear Cover: *Vriesea* 'Peppermint Crisp' 9 N Thomson

By: Glen Bernoth

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## CALENDAR OF EVENTS 2015

October Meeting	15 October, Uniting Church, Merthyr Road, New Farm
November Meeting	19 November, Uniting Church, Merthyr Road, New Farm
<b>Spring Show</b>	14 <sup>th</sup> – 15 <sup>th</sup> November, BTTC, Windsor
<b>Xmas Party</b>	10 December 2015

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## ART, ARTISTS AND BROMELIADS

by Herb Plever

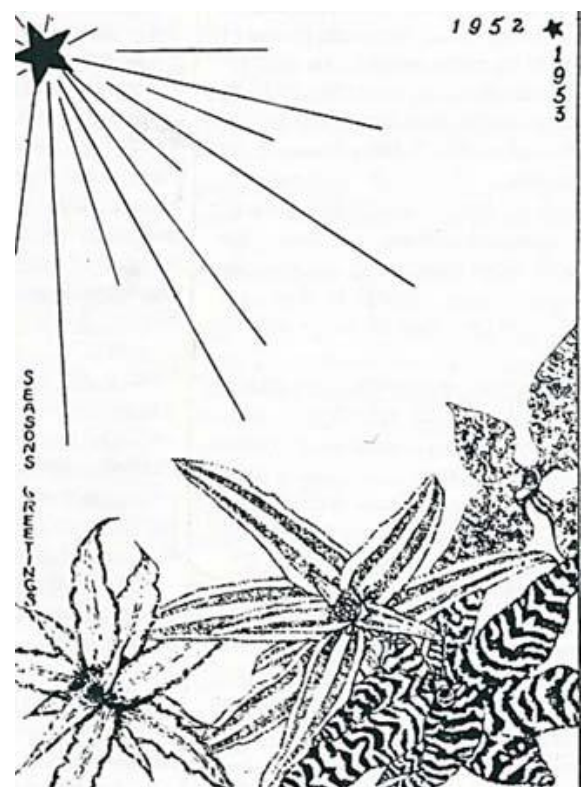
(Ed: This article is an extract from Herb Plever's article in *Bromeliana* April 2015. BSQ has made some small steps to encourage broadening of bromeliad activities into the creative sphere. The 2014 Autumn Show included a painting section, and photos and artistic display classes are included in shows and monthly meetings. We have not yet reached the level displayed in BSI Conferences. I recall that in Orlando 2012 the space devoted to art and artistic displays took up about one third of the competition area. Do we have a Matisse among us?)

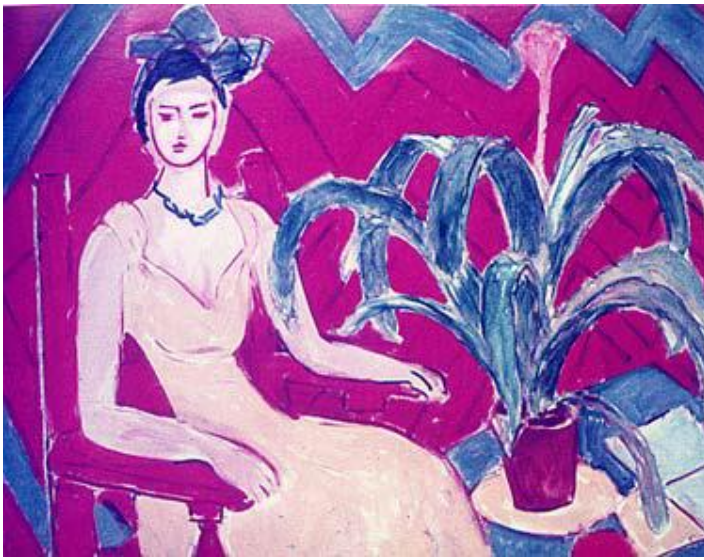
What is it about bromeliads that attracts and even addicts certain growers to them? After all, broms are not very popular or well-known compared to orchids, African violets, and other plant families that have large cult followings. I believe there is an aesthetic sensibility for architectural form in brom growers that leads them to notice and appreciate the rosette architecture in bromeliads. And there is still another narrower sensibility among tillandsia lovers that hooks them to the weird but lovable tillies. Such sensibilities exist among many interior decorators, movie and TV set designers, etc. as well as many of the people who were active in our society in past years. Those sensibilities also have been displayed by many prominent painters such as Henri Matisse one of the three artists (along with Picasso and Duchamp) who helped to define the revolutionary developments in the plastic arts in the opening decades of the twentieth century, responsible for significant developments in painting and sculpture.

In his earlier years Matisse painted a woman seated next to a tall *Aechmea fasciata*, as shown in the next page. In his very late years he took to creating wonderful art with coloured paper cut-outs; there was an outstanding retrospective of that creative work shown recently in the New York City Museum of Modern Art. One of those works, shown here, also displays Matisse's attraction to the rosette form.

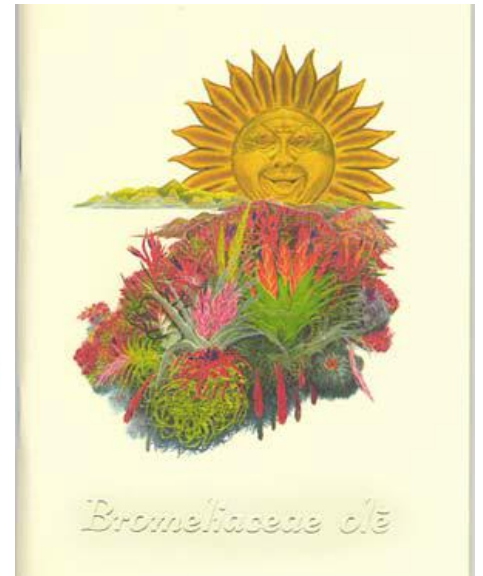
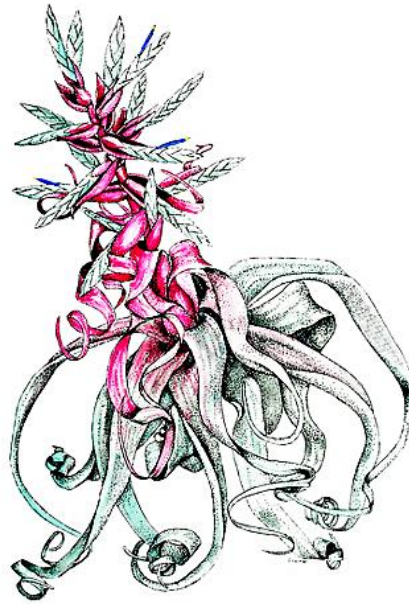
The great explorer-naturalist Mulford Foster, who was the first BSI President and Editor, was also a talented artist. (See his drawing right for the cover of the December, 1952 issue of the BSI Bromeliad Bulletin on page 2 showing *Cryptanthus marginatus*, *C. beuckeri* and *C. fosterianus*.)

If you Google 'bromeliad art' you will find hundreds of artists who are making such art. A great deal of art has been exhibited at every World Bromeliad Conference. Many competitive entries in the form of artistic arrangements, paintings, tapestries, posters etc. at each conference heightened interest in art. In addition, artists had separate commercial displays of their work. I have selected just a few of the many hundreds of such World Conference art, and they are shown opposite.

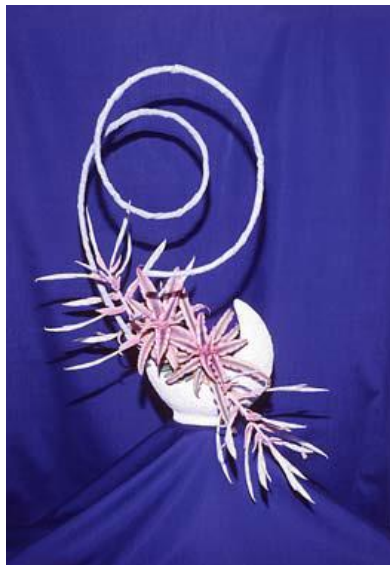




L and above: Henri Matisse



Sue Sill works: *T. baileyi*, *T. streptophylla*, and poster WBC Corpus Christi 1982  
 Below L: *Billbergia* painted on wood, San Diego 2006WBC, Centre: Artistry in Rhythm  
 Houston 1990WBC, R: John Barbie poster Miami 1986



Sue Sill (mostly known to us as Dr Sue Gardner) is a talented artist. She was trained in biology and received a PhD degree in taxonomy at Texas A & M. Her PhD thesis on the tillandsias is still considered an important reference source for tillandsia taxonomy. She was a leader and a President of the Corpus Christi Bromeliad Society in the 1970s and 80s. Sue has continued to grow as an artist and now she is working full time as an artist and teacher in McAllen, Texas. She has a large catalogue of paintings; (see them on her blog at [www.suesill.com](http://www.suesill.com).) The brochure cover for the World Conference in Corpus Christi in 1982 was made by Sue Sill (then Gardner). The theme was Bromeliaceae Ole.

Also on the previous page is the exciting John P. Barbie, Jr. painting and poster for the World Bromeliad Conference in New Orleans in 1986, called 'One Mo' Time'. It reflects the jazz, old world buildings and broms for which the town is justly famous.

The photos here are just a few of the many excellent works entered by talented artists in every World Bromeliad Conference. They were in diverse categories such as Artistic Arrangements and Artistic Display, or they were entered in an art category on a specific theme, or they appeared on the conference brochure cover.

I think they reflect the many different sensibilities of members and activists who are attracted to the beautiful bromeliads we get such pleasure in growing. Houston will host the WBC in 2016; this will be the 4th time, and you can look forward to seeing some great art as well as well-grown bromeliads.

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## Book review – Blooming Bromeliads

Blooming Bromeliads is authored by Ulrich and Ursula Baensch, published in 1994. This book is in the BSQ Library and well worth inspection. It is out of print in English so the Library copy is really useful. A German version with a translated addendum is still available. It contains a huge range of photographs of bromeliads and some broader discussion of habitat culture and biology. The “blurb” from the flyleaf is reproduced following. Allowing for the element of promotion inherent in such a place, it gives a good outline of the book.

Bromeliads are a family of plants distributed in the subtropical and tropical regions of the Americas. Its best known representative is the pineapple. There are 52 genera incorporating some 3000 species and varieties. During the course of evolution, the various species have adapted to the most varying ecosystems. Bromeliads live in deserts as well as tropical rainforests, in lowlands and on mountains up to 4000 m altitude. A peculiar type of adaptation is the epiphytism in which the bromeliads grow on other plants without doing any harm to their hosts. It is unfortunate that to date so few representatives of this extremely interesting and colorful family have made their way into ornamental horticulture.

Ursula and Ulrich Baensch are experts in this field. With this book they intend to draw attention to and cause curiosity toward the exotic and bizarre world of the bromeliads. During many years of work, the authors have created an outstanding book on bromeliads out of a vast amount of information and photographs.

The reader is presented with a flood of approximately 1000 photographs providing an impression of the surprising variability of the bromeliads. Practical hints make it possible for everyone to successfully cultivate bromeliads at home. The place of origin for this book, "Tropic Beauty Garden," in the Bahamas, takes the reader into subtropical regions; the vivid reports on two journeys to Costa Rica and Mexico introduce him to the natural habitats of the bromeliads. The book is completed by historical and descriptive biological data about bromeliads; it also provides range maps with indications of distribution centers. A view into the cultivation work is excitingly interesting.

A separate chapter deals with arboricol frogs associated with funnel bromeliads and shows how these fascinating creatures live in the miniature ponds of the bromeliads' cisterns high up in the branchwork of the rainforest.

The book not only impresses with its exquisite color photographs, but the amount of valuable information provided far exceeds the level of a picture book. For the first time, numerous hybrids are described and illustrated in color. Including the silvery gray Tillandsias that have become so popular during recent years, 23 genera are discussed in detail. Colored ornamental bands make it obvious which genus belongs to which of the three subfamilies, and an original system of markings in the species chapters results in finding the related illustration with no effort. This book clearly transfers the admiration and the excitement for the bromeliads from the authors to the reader.

## Amanda Scooped the Pool

by Peter Paroz



BSQ has been a keen exhibitor at the EKKA -RNA Exhibition -since the early days of the Society.

In August, Amanda Mead and her band of helpers won all the prizes in the Special Interest Section, with the following awards:

***Special Interest Group***

First

***Most Effective Display***

Mabel Burnett Shield

***Most Educational Display***

Colin Campbell Memorial Award

Below The BSQ team L to R: Rob Murray, Barry Kable, Amanda Meads, Pat Barlow, John Olsen, Bob Cross.





With some initial ideas of Retro, Vintage and Recycling, Amanda Meads and Barry Kable visited Bob Cross to devise the initial plan. Bob has a great collection/accumulation of items from his past role as display convenor.

The availability of rusty corrugated iron initially suggested an old style dunny but this morphed into the abandoned garden shed. (This proved to be a great focal point; attracting a lot of comment from the passing parade.) The fallen tree branch was added later to provide the base for displaying the epiphytic tillandsias. The leaf litter made a rustic path in keeping with theme of the deserted shed, along with the vintage garden tools.



Plant wise there was no early 'want list', except perhaps for the large *Alcantarea*; and the decision to include plants from each of the sub-families. This inclusion, along with a descriptive notice, contributed greatly to the educational aspect of the display. The large specimen plant of *Quesnelia* 'Tim Plowman' (see R) was placed at the front as another focal point; again attracting a lot of attention with much speculation whether the leaf curl was natural. The group of Guzmanias provided a great show of flowering bromeliads

The animal frame –actually a small horse- made a great shaggy dog with its coat of Spanish moss.

The floral pyramid structure (shown R) displayed mini neoregelias and a wonderful array of bromeliad inflorescences, this really did create a WOW factor.



## *Ursulaea Macvaughii*

At the recent BSQ Autumn Show there were several specimens of *Ursulaea macvaughii* on display. This species was originally described in 1964 as *Aechmea macvaughii*. In 1994, Robert Read and Ulrich Baensch introduced a new genus *Ursulaea* and moved this species and the closely related *Ursulaea tuitensis* to be the only two species in the genus. Their article appeared in BSI Vol 44 No5 pp205-210. The article is not reproduced here as it essentially contains some esoteric taxonomic arguments against some splitters who had suggested seven subgenera be elevated to full generic status together with 140 combinations.

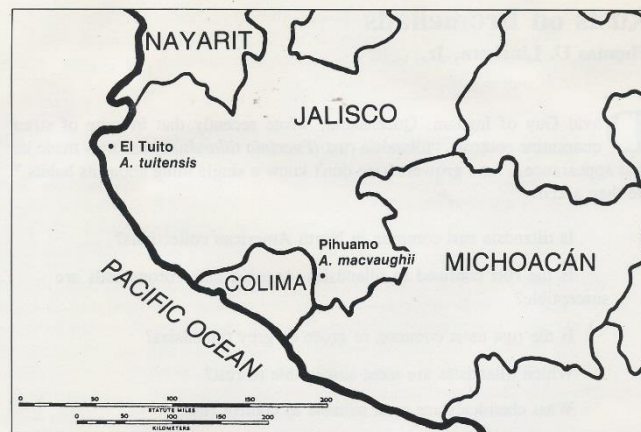
The genus name honours Ursula Baensch the co-author with husband Ulrich of *Blooming Bromeliads*. I recommend borrowing this book from the library. It has been published in several languages and is out of print in English. I have a German version which contains the many photos of bromeliads and text in German which doesn't help me. However, there is a separate English supplement with the text translation. The flyleaf details outlining the book are in a following article in this issue.

The following text is paraphrased from the discussion of the genus in *Blooming Bromeliads*:

*Ursulaea (Aechmea) Gen. Nov.*

*Ursulaea tuitensis* - we (ie "Tropic Beauty Gardens") have two different phenotypes, one was initially regarded a form of *Aechmea macvaughii*, but then recognised as a separate species by MAGANA & LOU. Their description agrees better with the phenotype cultivated in Tropic Beauty Gardens. Whether these differences range within the phenotypical variability (environmental influences) or whether these are genotypical variations (inherited) remains to be investigated. It is a succulent, easy to cultivate species which requires a highly permeable substrate. Habitat: Jalisco, southern Nayarit; on rocks, 1500 m.

*Ursulaea macvaughii*: It took four weeks from the first sign of a bud to the opening of the first flower - a thrilling time - not often experienced. When crossing various species of *Aechmea* and *Billbergia*, the authors noted features of the flower that differed from *Aechmea*. Detailed studies by R.W. READ then resulted in the establishment of a new genus. It takes three months from pollination to ripe seeds, and it is only then that the few offshoots develop. They need another five years until they flower. Habitat: Jalisco, east of Colima near Pihuamo, Mexico; 0-600 m; epiphytic.



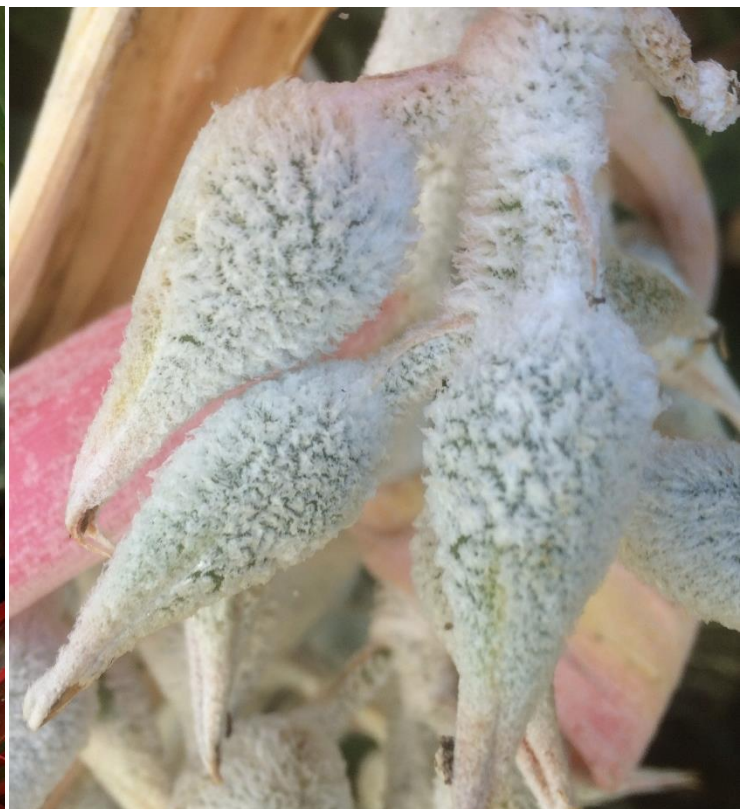
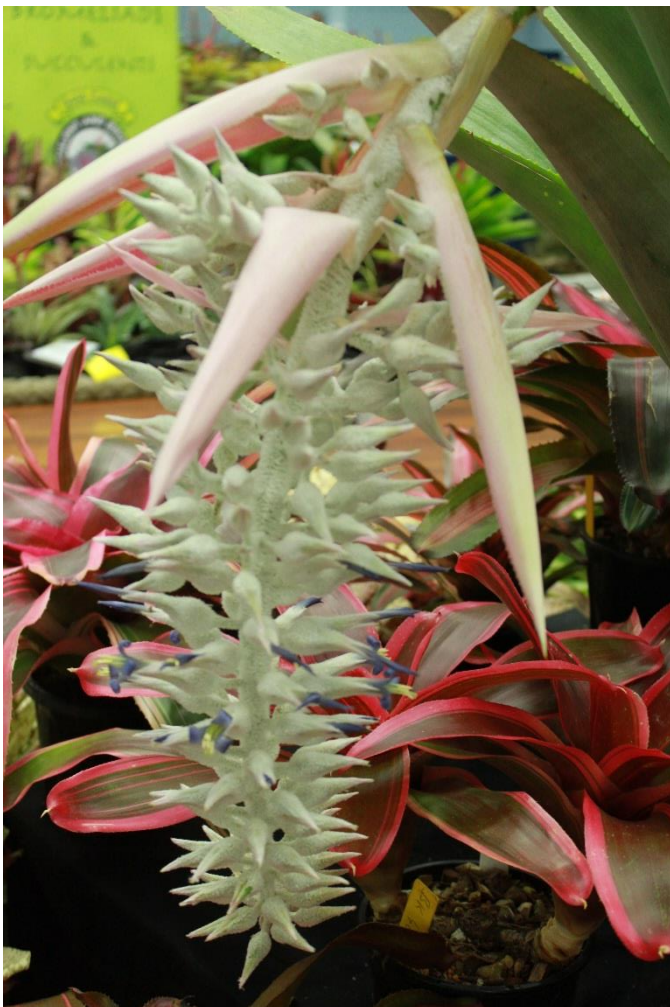
This map detail shows the locations of El Tuito and Pihuamo in Jalisco, Mexico, where *Aechmea tuitensis* and *A. macvaughii*, respectively, have been collected.



*Ursulaea macvaughii*



*Ursulaea tuitensis* ( BSI photo)



Left: detail of inflorescence of plant above left  
 Above: ripening seed pods of *U macvaughii* 2 months later than the photo left showing increased "furriness" of seed pods.

Both these species also differ quite considerably regarding their shapes. *Ursulaea tuitensis* is more succulent and stores only very small amounts of water in its rosette, while *U. macvaughii* forms a tank-rosette with a large storing capacity.

Both species of *Ursulaea* show features that lie between *Billbergia* and *Neoglaziovia* with the affinities being closer to *Billbergia* than to *Aechmea*. With Mexico being the origin of *Ursulaea*, it seems to be at the extreme edge of the variability of *Billbergia*. The latter genus also includes a species with long pedicels and very large ovaries as is the case in *Ursulaea*. The new generic name was proposed by Dr. Robert W. READ and refers to *Ursula* BAENSCH, co-author of this book. Both authors highly value this honor.

The BSI article (Vol 44 No5, 1994), includes cultural notes as below and also the formal description of each species which can be researched via our library collection. The key to separating the two species within the genus is re-presented here:

1. Inflorescence pendulous, compound; leaves ligulate, stiff, erect to about 120cm long by 16cm wide, forming a water-impounding tank; floral bracts about 1cm long; sepals serrulate.....*Ursulaea macvaughii*
2. Inflorescence erect, simple; leaves triangular, succulent, spreading, 28-56cm long by 2.7cm wide, not usually impounding free water; floral bracts about 4.5cm long, sepals entire.....*Ursulaea tuitensis*

#### **CULTURAL NOTES**, by H. Ulrich Baensch.

**U. macvaughii:** Five weeks after the exciting appearance of the bud, the first flowers opened on Christmas Day in 1992. Flowering went on for about 4 more weeks, a few flowers, mostly 2-4, opening almost every day. The flowers appeared irregularly throughout the inflorescence. As a result there were numerous opportunities for attempts at hybridizing. Seed resulted from crossings *A. chantinii*, *A. fendleri*, *A. ramosa*, and *A. tessmannii* as pistil plants; *Androlepis skinneri* and some *Billbergia* species as pollen plants. The most vigorous seedlings resulted from crosses with *Billbergia*. They are much stronger than the seedlings resulting from self-pollination.

*U. macvaughii* dominates in nearly all other crosses mentioned. The young rosettes of the hybrids are succulent and assume the shape of straight *U. macvaughii*.

Another form has very inconspicuous scales on the upper portion of the panicle. The dark olive green leaves are shiny because of the lack of trichomes on the upper side. The leaves are covered with small gray scales beneath.

**U. tuitensis:** After years of waiting, an inflorescence finally developed. This succulent plant is really difficult to cultivate under local conditions in Nassau. Maybe it requires cooler nights. Apparently there are different varieties. My wife Ursula and I suspected that these plants were not *aechmeas* and asked our friend, Dr. Robert W. Read, who confirmed that they represent a distinct genus. The new genus, with only two species, is an interesting one. Perhaps it is an interesting link to other genera representing a special crossing partner with good prospects. We respect Bob's precise taxonomic work and appreciate his suggestion for naming it *Ursulaea*.

[Ed-Careful readers will have noticed that these authors have disagreed on the ease with which *U. tuitensis* can be grown. If it does require cool nights, it may struggle in SEQ.]

## The Genus Vriesea

The genus is named after the Dutch botanist Willem Hendrik de Vriese. He initially qualified in medicine and moved into botany in the 1830s securing professorial posts in the Netherlands.

Interestingly, his research was not into bromeliads but in the 1850s he focussed on the Dutch East Indies spending his time working in Borneo, Java, Sumatra, and the Moluccas. He returned to the Netherlands in poor health and died shortly after his return in 1861. The botanical genus Vriesea (family Bromeliaceae) was named in his honour by British botanist John Lindley.

The key in Smith and Downs major tome “Flora Neotropica, Monograph 14 Part 2 – Tillandsioideae” establishes what distinguishes a plant as a Vriesea. In summary the subfamily Tillandsioideae (of which Vriesea is a member genus) has entire leaf margins, ovaries superior or nearly so and fruit capsular, and seeds with a plumose appendage at base or apex or both. Within that subfamily “petals bearing scales on the inside of the claw” differentiates the genus Vriesea. These petal scales are not simple to identify, but with a trained eye, can be discerned as small attachments on the base of the petal.

More recent DNA studies have thrown somewhat of a cloud over the division between Vriesea and Tillandsia and whether each is a single genus. It seems likely that both genera will be subdivided based on DNA work. Discussion of potential changes abounds but nothing is final yet.

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For many years the focus on *Vriesea* was on the plants with spectacular inflorescences. More recently the patterned leaf types have been more fashionable and subject of many hybrids. It seems from the Baensch text "Blooming Bromeliads", that these two groups of *Vrieseas* also divide along the lines of their pollinators.

The ones with a colourful inflorescence are pollinated during the day by hummingbirds. It makes sense for these plants to have visual cues for the birds. The patterned leaf species, tend to have somewhat drab inflorescences and are pollinated at night. Hybridists of the patterned leaf *Vrieseas* often complain about the night work involved. So with some logic to the separation by inflorescence, there is less rationale to explain why the daytime flowering ones tend to be plain green leaved and the night forms patterned. That is not universally true as *V splendens* and *V ospinae* for example have striated leaves and colourful inflorescences.

*Vrieseas* are predominantly found in the tropical zones and the range of the genus extends from southern Mexico and the Caribbean islands through Central America and then splits east and west of the Amazon basin. While the majority of species come from Brazil, few are found in the Amazon basin (see maps in Smith and Downs p 1970). On the west of S America, the genus is largely confined to the western slopes of the major ranges through Columbia, Ecuador and Peru. Along the east coast *Vriesea* are found in relatively narrow strips in coastal Colombia through to NE Brazil and then areas along the east coast of Brazil.

## **Discussing *Vrieseas* with Mal Cameron**

### **What first drew you to this genus?**

The first thing that drew me to *Vrieseas* was the diverse range of very attractive shapes & patterns of the foliage.

I was also thankful that they are spineless.

### **For best appearance how should they be grown?**

I have found most foliage *Vrieseas* like warm & fairly moist conditions.

They all show best form & colour in all different conditions.

Some prefer warm conditions with bright light, others like more shady locations. You very much have to get to know your plant to work out the best conditions that suit your plant. To some extent this is also a matter of personal taste.

### **When to pollinate plants?**

Pollinating your *Vrieseas* is done late at night when the stamen becomes receptive, then no later than early morning before it starts warming up.

Ideal time is after 10pm & before daylight for best results.

### **Potting media?**

Starting off as seedlings we use a coir peat which holds moisture very well, which the seedlings need at a young stage.

When potted on after about 8 months we used a slightly more open mix but still trying to hold a large amount of moisture. Once again after another 8 months we repot into our normal potting mix. We use a mixture of ash, soft fall coconut husk & natural mulch, which seems to work well for us.

### **Fertilisation**

We used a standard 9 month slow release fertilizer at all stages. You can also use a low nitrogen foliar fertilizer which works very well.

**Nitrogen (N)** – nitrogen is largely responsible for the growth of leaves on the plant.

**Phosphorus (P)** – Phosphorus is largely responsible for root growth and flower development.

**Potassium (K)** – Potassium is a nutrient that helps the overall functions of the plant perform correctly.

### **Watering regime**

Growing my Vrieseas I water once a fortnight in Winter & in Summer it could be as much as every second day, depending on the heat. Water & light are some of the key elements in growing your Vrieseas to their prime condition.

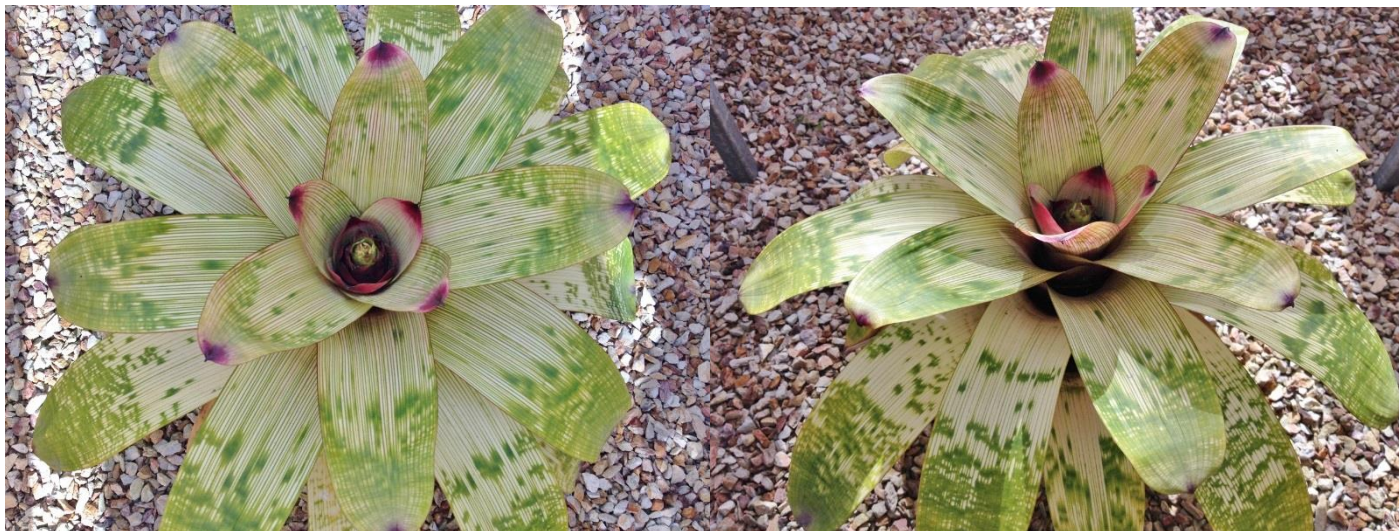
## Some Cameron Vriesea Hybrids

Photos by M. Cameron

### Cross Vr. Milky Way X Vr. Forrest....

These are two pale hybrids. We were hoping to produce some very white hybrids.

This cross produced some beautiful white broad leaf hybrids, which we think a few are worthy of registration.



### Vr. 'Arctic White Diamond.' (Below)

This is one of our best white Hybrids. The foliage centre is pure white with large rosy red tips. Registered with the BCR July 2014.





### Vr. 'Arctic Snow Drift'

This one has creamy coloured foliage with lined markings and rosy red tips. This one is very different because of the smudged green on the outer foliage. (Registered with the BCR Aug 2014.)



Both are framed with a fine red edge around the outside of the foliage.

### Vr. 'Love Bite'

Vr. Frost Bite  
x Vr. Milky  
Way.  
Created in  
2010. As  
registered  
on the BCR.

This was the result of trying to create a nice broad leaf Vriesea with dark fingernails, and this was the best out of that cross.



## **MY THOUGHTS ON HYBRIDISING VRIESEAS by Alan Phythian**

In 1996 I self-pollinated a Vr. 'Red Chestnut' as I had a brainwave to try and reverse the colouring in it and this started my interest in hybridising Vrieseas. Previously I had some success with Cattleya orchids.

At a Tillandsia Conference Peter Tristram gave a talk on the losses in Quarantine with importing plants into Australia and I suggested we should try to create hybrids here in Australia. Olive Trevor and Cheryl Basic were also at the conference and they both said I could use their plants if I wished to give it a try and Bob Larnach and Jack Koning were also a great help.

I have never believed that you should cross two plants together just because they are both out in flower. You should set yourself a target of what you want to achieve and work towards that. Study photos of the hybrids and more importantly their breeding, and that will give you some idea of what plants are dominant and which are recessive. An early pitfall I fell into was with Vr. Hieroglyphica. The plant I tried to use first, though a beautiful plant, wasn't fertile this I believe was a result of the Europeans crossing diploid plants with tetraploid plants as is done with most Guzmanias.

Diploid or  $2n$  plants have 2 sets of chromosomes which determine the characteristics of plants and any future progeny and is the normal setup with plants found in the wild.

Tetraploid or  $4n$  have 4 sets of chromosomes which because of their doubled number assert double the influence that a normal diploid plant would such as larger flowers and wider leaves but in most cases are slower growers. Tetraploidy can occur in tissue cultured plants or seed/seedlings that have been treated with a chemical called Colchicine.

Triploid or  $3n$  is the result of crossing a diploid plant with a tetraploid plant and in most cases the resulting plants are sterile but generally they flower better and grow faster.

After selecting the parents you want to use, you then get around cross pollinating them and this is another area that I have strong views on.

Vrieseas flower mostly at night - some early some late. I always cover the stigma with a short piece of drinking straw (about 3cm) when the flowers first open and remove the 6 pollen anthers while the pollen is still wet. This helps stop any unwanted pollen getting on to the stigma. I always try to use older pollen, so I have a pollen bank that I store in the bottom of the fridge. This ensures that the pollen is good and dry to use as soon as the stigma is ready to accept it. It then travels down from the stigma to the ovary via the three styles which contains the pollen tubes. Though the three styles might only measure about 1mm across they contain about 50 pollen tubes. This is why you can get about 50 seeds in each of the 3 sections of the seed pod.

This seems like a lot of trouble to go to but it ensures that you are using the pollen you want to use. I have been told on many occasions "Oh I get up early in the morning and the flowers are still open so I do it then." To my way of thinking how do you know that an insect has not pollinated it during the night or the pollen tubes have been damaged thus you don't know for sure what the true pollen parent is if you do get seed.

The seed pod will mature in about 9 to 12 months. You can tell when it is ready as it starts to split and it is best to gather it then because if you leave it go till it splits right open the seed will blow everywhere.

For those of you who wish to try to grow seedlings an easy method is to use the tall round plastic takeaway container filled to about 30 to 35cm with fine coconut peat. Sterilise with boiling water and when cool spread seed on top and spray seed with a mixture of 1 Milton tablet to 1 litre of water. Pour off excess water and put on the lid. If a fungus appears just spray it with the Milton mix and pour off the excess water.

The seed should germinate by 3 to 4 weeks and then it will take about 12 months to get to about 20mm high and you can then transplant them into community pots.

## Beating the gun

by Derek Butcher

In the Olympics, you are only allowed to beat the gun once, and have the threat of disqualification to worry about. Botany has rules about trying to get in early and I refer to the article by Peter Waters on DNA analysis in an earlier issue. See Bromeliaceae XLVIII:18. 2014. He infers that DNA analysis will solve all our naming worries whereas in truth it will only add another dimension to discuss and link with morphology (what a plant looks like). These new genera names are only on the drawing board and have not even been published so that PEER review can begin. I am reminded of the acceptance by Selby Gardens of the new genus *Lapa* BEFORE it was published as *Lapanthus*!

I agree that allocating a species to a genus can be easy but it can also be very difficult. It was not a simple reason why Selby refuses to accept Jason Grant's move. If they were serious they would transfer those Tillandsias with petal appendages to *Vriesea*. How is it that Selby acknowledge *Pepinia* instead of *Pitcairnia* and yet leave some *Pepinia* varieties under the *Pitcairnia* banner? Why did Elton Leme describe *Aechmea rubrolilacina* when it fits into *Portea*?

Bromeliaceae is full of anomalies in naming and we should not refer to new genera until they are published. Things are bad enough now with incorrect identity on cultivated plants to introduce more confusion. Botanists have it easy in identifying plants found the wild compared to trying to identify an unnamed plant found in captivity.

### Background

In 2013 Manzanares presented a paper to the NZ conference base on the latest findings based on DNA investigations. IT IS NOT A PUBLICATION. New genera names suggested included Barfussia, Cipuropsis, Ericgoudeae, Harrylutheria, Josemania, Lemeltonia, Waltillia, Zizkaea.

## Toowoomba and Districts Bromeliad Society

by Sue Janetzki

Some bromeliad growers in Toowoomba were previously part of an orchid society and during last year they made a decision to form their own group. We started out with about 12 members and became incorporated in September. By the end of the year membership had grown to 29. As we were growing so quickly the chairperson's home was no longer suitable for meetings. Early in the year we placed news items in the local papers. The response was fantastic. January saw the group move into a hall for meetings and a new format was started. We had space to start popular vote as well as plant sales. Now membership has grown to 40 and new contacts are still coming from the media releases. We are very grateful to other bromeliad groups who have encouraged us and have also offered support. Our meetings are held on the 3<sup>rd</sup> Sunday of the month 1.30pm to 3.30pm at Sacred Heart Primary School Hall Toowoomba.

## Progress Scores for Popular Vote

(to end August)

### Popular Vote Aggregate

<b>Advanced</b>	<b>Feb</b>	<b>Mar</b>	<b>May</b>	<b>Jun</b>	<b>Aug</b>	<b>Sep</b>	<b>Nov</b>	<b>Total</b>
Bruce Dunstan		8						8
Peter Paroz				5	5			10
Barry & Ann Kable	9			5	4			18
<b>Intermediate</b>	<b>Feb</b>	<b>Mar</b>	<b>May</b>	<b>Jun</b>	<b>Aug</b>	<b>Sep</b>	<b>Nov</b>	<b>Total</b>
Fred Thomson					2			2
Maxim Wilson	4	2	1					7
Pam Butler		1	2	1	3			7
Greg Aizlewood				2				2
Pat Barlow	6	1	7	1	4			19
David Vine		1						1
David Rees				1				1
Barbara McCune		5	3	5	4			17
Ron Jell		3	5	7	7			22
Greg & Narelle Aizlewood								0
John Olsen		6		3				9
Margaret Kraa		1						1
<b>Novice</b>	<b>Feb</b>	<b>Mar</b>	<b>May</b>	<b>Jun</b>	<b>Aug</b>	<b>Sep</b>	<b>Nov</b>	<b>Total</b>
Jenny Ittensohn	2	1	2.5		2			7.5
Rick Cairns	8	3						11
Charmaine Rooney					3			3
Denise Ball					1			1
Sharon Born		2	1.5					3.5
Dorothy Andreasen		8	7.5		7			22.5
Kayleen Courtney		1	3.5					4.5
Livia Doidge	1			5	4			10
John Hodgkinson				3	1			4
Rose Levanti-Niblock					1			1
<b>Decorative</b>	<b>Feb</b>	<b>Mar</b>	<b>May</b>	<b>Jun</b>	<b>Aug</b>	<b>Sep</b>	<b>Nov</b>	<b>Total</b>
Sharon Born					3			3
Brian Wallace			1					1
Denice McLean			3		5			8
Jenny Brittain & Steve Molnar			5					5

*Tillandsia*  
'MaggieG'

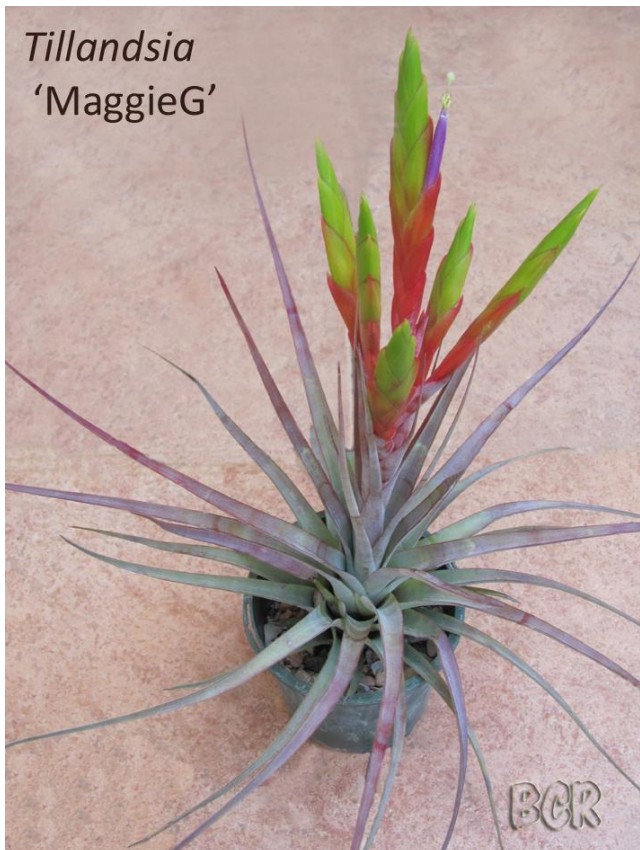


Photo 1 Plant as registered



Photo 2- Second Flowering



Photos 3 (L) and 4(R) Current Flowering

## A Specimen Specimen

Peter Paroz

Most bromeliad show schedules require that a specimen plant consist of at least three plants with the connecting rhizome intact. The photos are those of my hybrid, *Tillandsia* 'MaggieG' (*T. fasciculata* x *T. concolor*). The influence of *T. concolor* appears minimal except for size and shine on the flower bracts. The hybrid is essentially a half sized *T. fasciculata*.

The photos show the increase in size from the first flowering. The cross was registered in 2011 as shown in the annotated photo extract from the BCR. The second flowering (Photo 2) shows five offsets and spikes with branches. The current flowering (Photos 3) shows twenty one spikes with 43 branches. Close inspection shows several small offsets with an unbranched spike. The latest flowering shows all the signs of having been 'forced'. I did not treat the plant with any chemicals; the likely culprit was a smoky grass fire. I cannot recall any smoke at the time when flower induction would have occurred. A *Tillandsia punctulata* specimen growing nearby produced only two flower heads from five mature offsets; and there were no premature flowering plants in other plants in my collection.

(The effect of smoke on bromeliads was discovered in the late 19<sup>th</sup> century in the Azores. Pineapple plants on the verges of fields exposed to smoky grass fires flowered prematurely. In the 1930s, the active agent was found to be traces of ethylene. This is the basis of the note that appears from time to time that a bromeliad placed in a plastic bag with a ripening apple will be induced to flower. The ripening apple gives off ethylene.)

## Science Uprooted

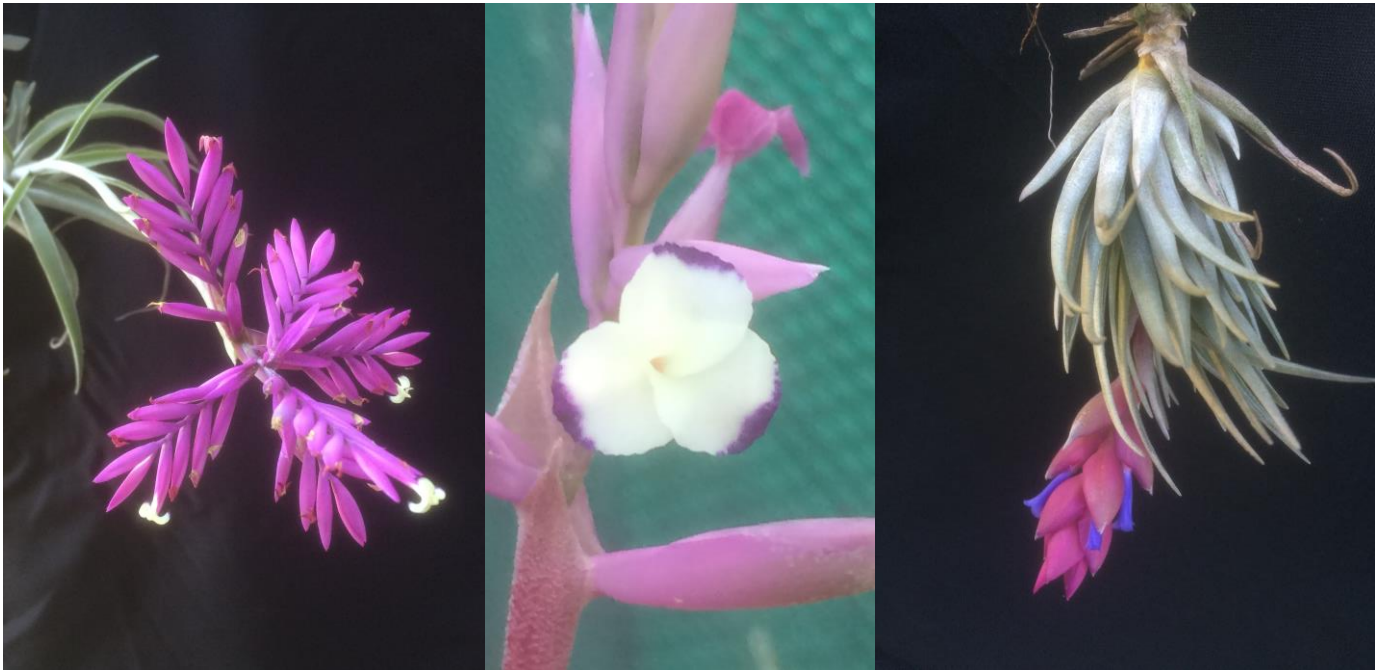
by Mulford Foster

(From Long Beach-Lakewood Bromeliad Study Group 1985 vol.x no.4)

For the past 27 years I have literally lived under a canopy of Spanish Moss here in Florida. I have used it on wire netting to shade my plants. I have pulled tons of it from trees. I have enjoyed the exquisite fragrance of its delicate, transparent green flowers which is released between the hours of eight and twelve on the soft spring nights. I've seen the tiny seeds suspended on a silken parachute but I've never planted one of these seeds nor seen the tiny baby plants that emerged from those seeds until a few weeks ago. Yes, I was surprised and very much thrilled. It was Easter Sunday morning. In our garden is a very much neglected plant of *Ligustrum coriacium*. It is a slow growing plant with leaves that appear to be only half developed. This *Ligustrum* was smothered with Spanish Moss and *T. recurvata*. Each species of plant seemed bent on strangling and smothering the *Ligustrum*, so I started tearing out these over ambitious plants, only to find many, many tiny tillandsias clinging to the branches, it was virtually an epiphytic plant nursery. And not all of the little plants were those of the *T. recurvata* as I at first had thought. I found plants from one to a dozen years of age of *Tillandsia usneoides* and they had honest to goodness roots!!! Roots that had held on for several years or long enough that they would be long enough to catch on a branch if the wind tore it loose from its birthplace. I found plants, some of them but a half-inch long and others eighteen inches long, still clinging with their little thread-like roots to the bark. And so, one of the most cherished beliefs of the entire bromeliad family - the weird Spanish Moss with roots 'absent' was shattered. *T. usneoides* DOES HAVE ROOTS in its early stages just as every other member of the remarkable bromeliad family has, although the roots dry up and are not necessary for it in later years.

## Tillandsias in Spring

Over the last few weeks a number of Tillandsias have responded quickly to Spring and bloomed.



*T cacticola* – inflorescence above and petal detail R;

*T carmine*



*T 'Lemon Drop'*(unreg)

*T recurvifolia* x *ixioides*





The photos above are a collage of bromeliad Photos sent in by Meg Kerr. The editor welcomes receipt of photos. Show members your garden!

## ***Tillandsia capitata* and its identity problems**

**by Derek Butcher**

As reported in Die Bromelie 2015(2): 62-64. 2015

*Tillandsia capitata* came into being in 1866 with a plant found in Cuba. In the intervening 147 years many plants have been found throughout the Caribbean and mainland Central America and been given this species name, but come in all shapes and sizes. Ten years ago it seemed that a Cuban botanist was going to come to the rescue and give some meaning to the prevailing chaos, but alas nothing has eventuated even from DNA studies which seem to take front stage in botanists' current deliberations. Let us now look at cultivars linked to *T. capitata*. We should remember that nature abhors a vacuum and so too do nurserymen. Therefore, plants get given 'common' names and sometimes these are registered so all growers of bromeliads are aware. While it costs nothing in monetary terms to register it does take precious time to take the trouble.

This is a story about only part of the *T. capitata* identity crisis which some growers will heed and some not, but at least we try. Let us go back to the Journal of the Bromeliad Society 56: 64 (2006) where I tried to solve certain naming problems for a plant found in Guatemala which looked like a *Tillandsia capitata* but was sufficiently different to warrant a new name. To summarise, in the early 1990's we had a plant variously called, *T. xerographica x capitata*, *T. 'Maya'*, *T. sphaerocephala* Guatemala, *T. harrisii*, *Tillandsia capitata* 'Yellow Rose' (in New Zealand), and a name that I coined: *T. 'Rio Hondo'*. The latter name was based on the name *T. riohondoensis*, a name that was used by Renate Ehlers, Germany in preparation of a publication of that new species. But at that time she decided not to publish this species because of the identity problems of *T. capitata* in the broad sense. The name 'Rio Hondo' however was duly registered but I would suggest there are still many of these plants around with these other names on the labels.

Now to phase 2: there is a plant circulating as *Tillandsia capitata* 'Peach', also from the early 1990's, which originated from Bird Rock Tropicals in California / USA under their inventory number 'T030'. It was originally collected in Mexico, but was never registered under that name. Meanwhile there was a plant collected in Guatemala, which was also called *Tillandsia capitata* 'Peach'. We do not know who gave it that name, but we do know, it is being sold in Florida under this name. This plant has leaves that have that furry covering like a peach, which is also shared by *T. capitata* 'Rio Hondo', but the plant is significantly smaller. Because we do not know the source of either plant we can only surmise, they are closely related.

If you are a grower who prides himself/ herself on having a keen interest on plant identity you will be pleased to know that we have decided to coin two new names for the Register - *Tillandsia* 'Capitata Peach' and *Tillandsia* 'Guatemalan Peach'.

We leave it to you to decide, which name best fits your plant and suggest to others, who sell these plants, to use the new names, including 'Rio Hondo' if applicable.

In this issue [*Ed – of Die Bromelie*], Renate Ehlers finally publishes *Tillandsia riohondoensis* because in the many years since the first introduction nothing moved forward in identifying and classification of all these many plants called *T. capitata*. So she decided to go the first step and publish this outstanding plant. So from now on you can label your plants as *T. riohondoensis*.

[*Ed Note: Many plants sold in Queensland over the years as T capitata Peach are indeed T riohondoensis. The description of the new species is reproduced here having recently been published by Renate Ehlers in Die Bromelie 2015 (2): 57-61. 2015. The Latin version is omitted*]

## ***Tillandsia riohondoensis***

This new species is named after the area where it was found, Rio Hondo in Guatemala.

***Tillandsia riohondoensis*** Ehlers, sp. nov. Die Bromelie 2015 (2): 57-61. 2015

**Plant** stem forming, flowering 20-80 cm high, rosette somewhat secund, 10-70 cm high, 15-40 cm in diameter.

**Leaves** up to 35 cm long, very thin leathery light green, both sides strongly lepidote and therefore appearing greenish grey, upright to somewhat recurved.

**Sheaths** 5-10 cm long, 3-4 cm wide, elliptic, slightly curved, the edges involute (bent inwards), the basal half light brown, densely fine lepidote.

**Blades** faintly distinct from the sheaths, 1.5-2.5 cm wide above the sheath, up to 25 cm long, triangular, rather flat, edges involute, tapering to a linear tip, apex recurved.

**Peduncle** fairly short, 3-6 cm long, 6-8 mm in diameter, curved upwards, densely covered by a few imbricate bracts, bracts foliate, red coloured at anthesis.

**Inflorescence** (fertile part) 4-8 cm long, 2-3 cm in diameter (without the primary bracts), capitate, panicle with side-branches of first order, 5-15 spikes, upright, very densely and polystichously arranged.

**Primary bracts** similar to peduncle bracts, up to 25 cm long, blades recurved, the upper ones with reduced blade, at anthesis bright carmine red, on both sides densely covered by coarse white trichomes, the sheaths completely enfolding and hiding the spikes.

**Spikes** sessile, 1.5-2 cm (up to 2.5 cm) long, 8-10 mm wide, narrowly elliptic, acuminate, complanate, usually with 2 flowers, at apex sometimes another stunted flower, but no flowerless bracts at the base.

**Floral bracts** 1.1-1.8 cm long, 6-10 mm wide, elliptical or delta shaped, weakly acute, 2-3 mm shorter than the sepals, strongly carinate, nerved, thin, membranous, pale green, glabrous.



**Sepals** 1.4-2.1 cm long, 6-8 mm wide, elliptical, acute, thin, membranous with hyaline edges, nerved, glabrous, all 3 (including the abaxial) keeled, sub-free, the adaxial pair fused 1 mm high.

**Petals** 5.5-6.5 cm long, 9-10 mm wide, dark purple, tapering to 4 mm at the base and becoming white, forming an upright tube, the rounded tips somewhat recurved.

**Stamens** protruding up to 1.5 cm from the flower. Filaments 6.4-7 cm long, arranged in two whorls of unequal length, in the upper part oval in cross-section, 0.8 mm in diameter, violet, tapering to ribbon-like at the base and becoming white. Anther 2.5-3 mm long, 0.8 mm wide, attachment versatile 1/3 from the base, light brown or brown, pollen yolk-yellow. Style 5.5-6.8 cm long, white, purple in the upper part. Stigma 2 mm high, 1.2-2 mm wide, thin, white, with papillose spreading lobes (Type I according to Brown & Gilmartin). Ovary 6-7 mm high, 2-2.2 mm wide at the base, elliptic, light green.

### **Distribution and habitat**

*Tillandsia riohondoensis* comes from Guatemala, near the Rio Hondo in the province of Zacapa, and is known, so far, only from this locality. The plant grows on rocks in a very hot area on very steep volcanic tuff near a waterfall.

### **Similar species**

This new species differs from *Tillandsia capitata* Griseb. in the following characteristics: Plant forming long stems, rosette secund. Offsets not only appearing at the base, but also along the stem from the leaf axils. Leaves lepidote, quite thin and very grey. Peduncle quite short. Spikes very dense, internodes very short. Spikes with two flowers each, at base no flowerless bracts. The primary bracts are densely lepidote on both sides, the blades are very long. Flower bracts up to 3 mm shorter than the sepals, very small, strongly keeled, glabrous, membranous. All three sepals keeled and subfree.

### **Background**

This plant has been on the market for a number of years and particularly in many American collections. It was sold by Guatemalan dealers as "*Tillandsia sphaerocephala* Guatemala". In German gardens and collections, it also occurs under this or other fantasy names, but never, strangely, as *T. capitata*.

There are some offered as very small plants which come from offsets and were often cultivated by using flowering hormones. These plants seem often stemless or short stemmed. At the type locality or when mother plants are old, the plants are long stem-forming and much larger in diameter. The offsets appear, like in *Tillandsia harrisii*, willingly from the leaf axils along the entire length of the plant.

You can buy the plant as a common commercial plant, but, in nature near the Rio Hondo, it is extinct. In 1994 I received my plants from Uwe Feldhoff. Unfortunately, I was never able to see them in their natural habitat. When we were in Guatemala in 2010, I wanted to go with Uwe Feldhoff to Rio Hondo, but he reported that there were no more plants anymore. [Description and notes by Renate Ehlers *Die Bromelie* 2015 (2): 57-61. 2015]

## Glossary

The article above contains some species descriptions which rely on technical terms for precision. Key ones are explained below based on The Kew Plant Glossary.

Phenotype – The physical characteristics of an organism, influenced by both inherited and environmental factors;

Pedicel      The stalk of an individual flower in an inflorescence;

Panicle      an inflorescence in which the main axis has several lateral branches, each of which is branched;

Plumose      1. softly feathered; 2 like bristles which have fine hairs on each side;

Lepidote      clothed on the surface with small scales;

Imbricate      overlapping like tiles;

Anthesis      The time of fertilisation of the flower;

Polystichous with leaves or branches of an inflorescence arranged in several rows;

Distichous      in opposite rows, one on each side of the stem;

Acuminate      tapering to a long tip (usually of leaves);

Complanate      flattened;

Carinate      with a long narrow ridge over the length of the surface(=keeled);

Glabrous      smooth and without hairs, scales or other trichomes;

Secund      (of for example leaves on a stem) all directed to the same side.

# COMPETITION SCHEDULE 2015

**Note: In all MINI SHOWS Class 4 is any other flowering bromeliad species & hybrids**

## **January - MINI SHOW**

Class 1 – Aechmea species & hybrids

Class 2 – Vriesea species & hybrids

Class 3 – Dyckia species & hybrids

**Feb & Mar POPULAR VOTE** – any genus species & hybrids + novelty bromeliad display

## **April -MINI SHOW**

Class 1 – Bromelioideae not listed elsewhere in Schedule, species & Hybrids  
(Acanthostachys, Ananas, Androlepis, Araecoccus, Bromelia, Canistropsis, Canistrum, Edmundoa, Fascicularia, Hohenbergia, Hohenbergiopsis, Neoglaziovia, Nidularium,

Ochagavia, Orthophytum, Portea, Quesnelia, Ursulaea, Wittrockia)

Class 2 – Guzmania species & hybrids

Class 3 – Pitcairnia species & hybrids

**May & June POPULAR VOTE** – any genus species & hybrids + novelty bromeliad display

## **July - MINI SHOW**

Class 1 – Billbergia

Class 2 – Tillandsioideae not listed elsewhere in Schedule, species & hybrids  
(Alcantarea, Catopsis, Mezobromelia, Racinaea, Werauhia)

Class 3 – Neoregelia up to 200mm diameter when mature, species & hybrids

**Aug & Sept POPULAR VOTE** – any genus species & hybrids + novelty bromeliad display

## **October - MINI SHOW**

Class 1 – Neoregelia over 200mm diameter when mature, species & hybrids

Class 2 – Tillandsia species & hybrids

Class 3 – Pitcairnioideae not listed elsewhere in Schedule, species & hybrids  
(Brocchinioideae, Lindmanioideae, Hechtia), Puya), Navioideae, Pitcairnioideae (= Deuterocohnia, Encholirium, Fosterella)

## **November - POPULAR VOTE**

### **Plant of the month List for 2015**

March	Cryptanthus
April	Dyckia, Orthophytum, Puya
May	Alcantarea
June	Vriesea
July	Intergenerics
August	Rare Genera
September	Billbergia
October	Guzmania
November	Neoregelia, Nidularium

