

S.A. BROMELIAD GAZETTE

Vol 43

Number 2

April, May & June 2019

PUBLISHED BY:

The Bromeliad Society of South Australia Inc

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Born 1977 and still offsetting!

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Goudaea 'Sons of Tiger Tim' (Photo J Batty)

Meetings Venue:

Maltese Cultural Centre,

6 Jeanes Street,

Beverley S.A.

Time: 2.00pm. Second Sunday of each month. Exceptions –2019: 1st Sunday in May, 3rd Sunday March, June & September. - or unless advised otherwise (see dates below).

No meeting in December

VISITORS & NEW MEMBERS

WELCOME.



MEETING & SALES 2019 DATES

14/07/2019 (Xmas in July, 1230 for 1pm Catered lunch after Garden related auction only) 11/08/2019 (Winter Brag), 15/09/2019 (Workshop Genera Tillandsia single specimen), 13/10/2019 (Midi to Large Neoregelia), 01/11/2019 (Set up hall), 2/11/2019 (Extravaganza: 9AM – 3PM), 3/11/2019 (Extravaganza: 1000AM – 3PM) 10/11/2019 No Display or raffle (1200 start Committee, 130PM start main meeting, Pup/plant exchange, Special Afternoon tea – bring a plate of finger food to share, Auction)

Applications for membership always welcome – Subs \$15 single \$25 Dual NOW OVER DUE

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Roving Reporter April 2019

During the meeting I was lucky to sit next to a newbie who was keen to talk about her seed raising project using seed from a *Neoregelia* hybrid. She reported great germination and despite a few turning yellow she still had a pot full of ‘grass’. Seed raising is great fun because you are introducing NEW plants to your collection but with unknown possibilities. The chances of them looking like the plant the seed came from is very remote. The chances of getting something mediocre is high! BUT there is a chance you have grown something that is robust and colourful and unique. Bromeliads are very accommodating because they will remain as ‘grass’ if you leave them alone. If some (or one) show special promise it can be prised from the crowded bunch and given its own pot. After a year you will see whether your choice was a good one. When it flowers bring the plant/s into a meeting and see what others think of your hard work. It will be unique and you will have the right to name it

The main topic was Patterned leaf *Vrieseas* and I was disappointed in that very few other plants were brought in for display. However, it did show that many of the plants brought in are at the new end rather than old established. This has advantages by showing what is new on the scene but raises problems as to identity which has me referring to the Bromeliad Cultivar Register to find out what history they may have. In the old days a plant nursery had to have sufficient stock to make it worthwhile to print a catalogue. These days with the internet you can start selling straight away without divulging history or proper identification. There are some great plants changing hands this way but the purchaser should keep the seller on his/her toes. Keen growers are invariably members of a plant group where names are even more important and if plants are awarded prizes they should at least be correctly identified. One example was the Popular plant award that went to George Nieuwenhoven with his *Vriesea gigantea* x ‘Mauna Kea’. Regrettably, it only identifies the parents and we know that the seed batch concerned would have produced a motley crew. How varied were they? Only the hybridist would know but does he? Did he release the seedlings before he could have made that decision. Perhaps George’s plant is the only one to survive! If we showed a photo it would only show what is in Adelaide and could give wrong impressions of what to expect from a plant with this name on the label from interstate.

One that did stand out was *Vriesea philippocoburgii* in flower with its brilliant red primary bracts. A query was raised about the one with yellowish leaves and primary bracts with links to New Zealand although we do grow this plant in Adelaide, nobody seemed aware of *Vriesea reitzii*. Detail follows



Vriesea philippocoburgii
Vriesea reitzii compared

Vriesea reitzii Leme & Costa Journ Bot Soc 1991 p195-198

General notes

In November of 1990, during an expedition to Santa Catarina State, Jones C. da Silva, a bromeliad enthusiast of Rio Grande do Sul, Luiz Claudio Marigo, and I came across a vast, blooming population of a new *Vriesea* species in the neighbourhood of the pleasant town called Campo Alegre. The predominant color of the species, yellow, was everywhere, decorating the pine-forested landscape.

This species, for which I propose the name *Vriesea reitzii* to honor the memory of Father Raulino Reitz is surprisingly common in the pine forest (*Araucaria angustifolia*) in the states of Santa Catarina, Rio Grande do Sul, and probably Parana. It grows epiphytically, seldom on the ground, at altitudes from 750 up to 1,200 meters, or higher, where the temperature could fall easily below zero degrees Centigrade.

It was only a few days before our discovery that we learned about this ornamental species from Alvim Seidel, who had the plant identified as *Vriesea philippocoburgii*. In fact, in a broader conception adopted by Father Reitz, the new species had been misnamed as *V. philippocoburgii*. Our opinion, however, is that the new species can be visually differentiated by taking into consideration the typical populations from the Organ Mountains of Rio de Janeiro. The type specimen of *Vriesea philippocoburgii* was collected there and then typified by means of Wawra's beautiful painting. *Vriesea reitzii* is in fact related to *Vriesea philippocoburgii* but differs from it by the yellowish-green leaf blades with transverse, darker green lines, the yellow primary bracts, the branches with usually naked peduncles, as well as by the yellow floral bracts, strongly carinate and incurved toward the apex, and the yellow rachis.

In Santa Catarina, the evidence suggests that *Vriesea philippocoburgii* concentrates its populations from sea level to about 500 meters. It is found growing at higher elevations, however, inside the Atlantic rain forest as well as the restinga vegetation of the state of Rio de Janeiro. With that protective cover it avoids the colder zones.

Vriesea reitzii, on the other hand, is well adapted to the colder temperatures of higher altitudes, thus coinciding with the domain of the Brazilian pine. That being the case, temperature could be one of the most restricting factors of the differing altitude habitat preferences of these species.

Talking about New Zealand reminds me of a discussion I had in 2017 regarding their newsletter on the same subject. This in turn reminded me that Penny Seekamp says very few newsletters are borrowed by members from the Library. I find them very entertaining where you find out what other Brom Societies around the world are doing. My Margaret is often heard chuckling in the kitchen when she is reading them.

I expected the meeting on Patterned leaf Vrieseas to be mainly on *Vriesea fosteriana* and its variability and its variable hybrids but quickly learned I needed to broaden my horizon. Thanks to Barfuss et al there has been lots of changes in the broad *Tillandsia group* (this includes *Vriesea*) based mainly on new and different interpretations of their DNA. So *Goudaea* and *Lutheria* were on display. Luckily hybrid genera were not mentioned which would in theory contain *Lutheria* x *Goudaea* or x *Vriesea* etc. The mind boggles as to the number of such nothogenera (bigenerics) there could be. In the cultivar world there are already some 48 names listed against only 1 that is said to occur in the wild. Clearly creations of bigenerics are not on Mother Nature's list! It was pointed out that both *Goudaea* (yellow spikes) and *Lutheria* (red spikes) have attractive flowers which cannot be said for the likes of *Vriesea fosteriana*.

We can thank Peter Tristram for most of the *Goudaea* in Australia. In his importation of plants he had horrendous losses due to gassing by Dept of Ag. In years past I used to import Tillandsas and they were tough enough to suffer the gassing and survive. I admire their concern in not importing pests and diseases but got grumpy when small importation batches were closely monitored compared to those that came in those large ship-containers. Both *Goudaea* and *Lutheria* are upper puppers and you could see that Adam was reluctant to 'attack' his plant. Things are not that bad! Reading follows

HOW TO REMOVE AN "UPPER" PUP based on an article in the New York Newsletter by Herb Plever

"A few vrieseas are stingy in producing offsets and will put up only one pup after flowering, no matter how strong they are or how much they are fertilized. But most other bromeliads will produce at least two offsets and usually many more than that.

However, *Vriesea elata* and *Vriesea splendens* (and most of its cultivars such as V. 'Splendret' or the variegated form 'Galaxy') if left on their own will produce only one pup after flowering, and it will come up along the side of the inflorescence in the central reservoir. Instead of emerging from a leaf axil or from the base of the parent plant, these "upper" pups come up at the top of the plant. We don't know what evolutionary benefit these plants gained from adapting to a single upper pup, but, of course, we do not know their evolutionary history eons ago. Suffice it to say that natural selection was, as always, operative during this development - even if it might have been overcome by other physical factors.

These plants are called "upper puppers", and they are the only a few broms I know of that have this habit. You can leave the upper pup to grow on while the parent plant dies back. Eventually the upper pup will replace the parent, BUT since it is growing on top of the stem of the parent it will be somewhat out of the pot and the succeeding generation will be more so.

The alternative is to remove the upper pup and repot it. An additional advantage is that these stingy plants may produce basal offsets when the upper pup is removed. Surgical removal of the pup must be done with care as its base is fragile and may snap off if outward pressure is applied. So it is important to be able to visualize the base before any cutting is done. A very sharp knife is mandatory.

STEP 1 - Since the pup came up along the side of the inflorescence it will have a definite lean to that side. Orient the pot so that the leaning side is facing you (The parent's leaves had been cut short when the plant flowered to make room for more plants in the window tray. At the time I hadn't intended to do this experiment and write this article, or I would have left the leaves intact to have a more vigorous parent after the surgical removal.)

STEP 2 - Strip the parental leaves that arc covering the pup by separating them in the centre lengthwise. You will then be able to visualize the entire base of the pup, as shown in Photo 2 below.

STEP 3 - Make a horizontal cut below the pup base and downward vertical cuts on each side of the base to below the base and into the parent. Then place the sharp knife between the pup and the parent with the blade slightly angled toward the parent. A smooth downward cut all the way down will free the pup from its parent. Do not apply any outward pressure on the pup while cutting down to free it. If the knife is really sharp you won't need to push or apply pressure as the blade will do the work. When this pup came free from the parent I was happy to see that the base was intact and that it was showing roots at the bottom, as shown in Photo 3. Now that the pup is free from the parent, we must take additional steps to assure that it will remain healthy, free from infection and to prepare for its eventual safe potting in a medium.

STEP 4 - The base of the pup and the cut part of the parent are now vulnerable to infection from both fungus and bacteria. If you have a fungicide powder (or Rootone which has a fungicide) dusts the base of the pup and the cut side of the parent. In the alternative, swab some alcohol on those areas. These areas will not be safe until the tissue there has hardened and callused, and until then the pup should not be potted. This will take 3 to 5 days.

STEP 5 - During this period I like to suspend the pup in air so the base is not touching anything. I accomplish this by hanging the pup in a clean yogurt container with the leaves hanging over the top circumference.

STEP 6 - When the base of the pup has sufficiently callused, place the pup in a medium in which it will rapidly grow roots and establish itself to grow on its own. The area around the base should be consistently moist but not wet. In that area I would place pre-soaked pieces of peat moss (or sphagnum moss) that will retain moisture for a reasonable period. You can drop some potting soil into the hole to fill up the spaces, as rooting is encouraged when the base is more tightly surrounded by the medium.

To keep the pup stabilized and immovable during this initial period, I place two strips of masking tape overlapping across the top of the pot to tightly firm up the pup. This temporary brace should be removed when the pup is stabilized with its own roots.

BROMELIAD SOCIETY OF SOUTH AUSTRALIA JUDGING OVERVIEW March 2019

	Trophy	Winning plant	Grown by
TILLANDSIOIDEAE Clump (3)leaved Tillandsia & Grey leaved Vriesea	Josie Tonkin Trophy	1 st Tillandsia crocata 2 nd Tillandsia caput-medusae Highly commended Tillandsia 'Not so Tawny'	Peter Hall Julie Batty Ron & Bev Masters
'PRICKLIES'	Margaret Reppin Trophy	1 st Dyckia 'Comfortably Numb' 2 nd Deuterocohnia brevifolia Highly commended Dyckia 'Paulson's Pride'	Julie Batty Ron & Bev Masters Julie Batty
INTER-GENERIC	President's Trophy	1 st XNeomea 'Munchin' 2 nd XAnamea Highly commended XCanmea 'Smokey'	Ron & Bev Masters Ron & Bev Masters Ron & Bev Masters
BEST MULTIPLE SPECIMEN ANY GENERA Clump of 3 or more plants joined	Gummow Trophy	1 st Dyckia 'Comfortably Numb' 2 nd Neoregelia 'Hot Embers' Highly commended: Tillandsia crocata	Julie Batty Sue Sckrabei Peter Hall

BEST VRIESEA OR GUZMANIA Green leaved Vriesea & Green leaved Guzmania	Marie Robinson Trophy	1 st Vriesea correia-araujoi 2 nd Guzmania monostachia	Ron & Bev Masters Keith Bradtberg
GEORGE (GERD) RUDOLPH	Artistic Merit Trophy	1 st Praying Mantis 2 nd Caterpillar Highly commended: Porcupine	Peter Hall Peter Hall Ron & Bev Masters
LARGE NEOREGELIA Neoregelia OVER 400MM	Neoregelia Trophy	1 st Neoregelia 'Bullis Margaret' 2 nd Neoregelia 'Lucifer' Highly commended: Neoregelia 'Johannis De Rolf'	Jeff Hollinshead Adam Bodzioch Mike Griffin
Miniature Neoregelia Size range: UP TO 150MM	Jeanne Hall Trophy	1 st Neoregelia 'Hot Embers' 2 nd Neoregelia 'Groucho' Highly commended: Neoregelia 'White Hot Embers'	Sue Sckrabei Sue Sckrabei Sue Sckrabei
MAUREEN HICK	Midi Neoregelia Trophy Between 250 -400m	1 st Neoregelia 'Shep' 2 nd Neoregelia 'Cosoba' Highly commended: Neoregelia 'Chilli Pepper x Victoria's Secret	Sue Sckrabei Kallam Sharman Sue Sckrabei
BEST AECHMEA	Joan Williams Trophy	1 st Aechmea 'Pickanniny 2 nd Aechmea 'Red Bands' Highly commended: Aechmea 'Pico'	Ron & Bev Masters Mike Griffin Keith Bradtberg
BEST BILLBERGIA	Len Cork Trophy	1 st Billbergia 'Obi-Wan 2 nd Billbergia 'Camvey Dream' Highly commended: Billbergia 'Colan Spirit'	Sue Sckrabei Julie Batty Sue Sckrabei
BEST SPECIES Any Genera	Bill Treloar Trophy	1 st Hohenbergia leopoldo horstii' 2 nd Tillandsia zerographica Highly commended: Catopsis morreniana	Mike Griffin Adam Bodzioch Ron & Bev Masters
BEST SINGLE TILLANDSIA OR GREY LEAF VRIESEA	Len Colgan Trophy	1 st Tillandsia 'roland gosselini x rothii' 2 nd Tillandsia streptophylla Highly commended: Tillandsia xerographica	Adam Bodzioch Julie Batty Adam Bodzioch
BEST PATTERN LEAF VRIESEA OR GOUDAEA	Peter Huddy Trophy	1 st Vriesea 'Black Flamingo' 2 nd Vriesea 'Joyful Charm' Highly commended: Vriesea 'Princess Kadence'	Adam Bodzioch Adam Bodzioch Adam Bodzioch
<u>GRAND CHAMPION PLANT FROM ABOVE</u>	Ede Schaefer Trophy	Vriesea 'Black Flamingo'	Adam Bodzioch
RESERVE GRAND CHAMPION		Dyckia 'Comfortably Numb'	Julie Batty
AUNTIE MARGARET & UNCLE DEREK	Novice Award	1 st Neoregelia 'Bottom's Up' 2 nd Deuterocohnia	Keith Bradtberg Kallam Sharman

CONGRATULATIONS TO ALL & THANKYOU TO ALL MEMBERS WHO DISPLAYED PLANTS.



Vriesea 'Black Flamingo'
Grand champion



Dykia 'Comfortably Numb'
Reserve Grand Champion
Best Multiple specimen & pricklies



Tillandsia 'Roland Gosselini x
Rothii, Best Single Tillandsia or
grey leaf Vriesea



Neoregelia 'Hot Embers'
Best mini Neoregelia



Aechmea 'Pickanniny'
Best Aechmea



Artistic Merit Trophy



Roving Reporter May 2019

It was decided to hold the talks first and business last

Despite having a sore throat Adam led us through the plants on displays which were mainly *Billbergia* but first he had some tips as to how to prepare for the challenges of winter. All of this is common sense but it is nice to be reminded that most of our rain comes in winter. We should all know our plants as to which is delicate and which is tough. Each of these assessments depends on where you are growing these plants and where you live. It is hoped you are a grower who looks at your plants every day or so and not monthly and know what a happy and healthy plant looks like. While you can get an idea from what someone else does the final decision is yours.

While plants love rain instead of what comes out of the tap, too much gives belly ache! Remember too that the sun is weaker, comes at a different angle, and does not last as long. Most of your plants will be in pots so can be moved to better, warmer, more protected positions. Plants go slow in winter which means it is not a good time to take offsets unless in a case of emergency. Adam was justly proud of his flowering *Tillandsia xerographica*. This is CITES plant which means restricted sale world-wide. We are lucky that it does offset so plants are available but you need patience because it is slow growing. It is one that does not like Adelaide winters so keep it dry in the winter months. If you want to see them in abundance the botanic gardens in Singapore is the place to go.

The most popular plant went to Keith Bradtberg with his *Billbergia* 'Bruddah Iz'. Those of you into Music will think of Hawaii and this is where this hybrid originated. However one wonders how it got this name and linked to a Bromeliad. When plants are named after people you are supposed to get acknowledgement. We are reminded of the time when Burle Marx was suggested as a cultivar name but was refused by the family relatives. As Adam pointed out, a problem with this hybrid is that it is easily burnt by the sun so it needs more shade than normally needed for *Billbergias* to get those vivid colours so many have. What is interesting to me is that Father was not considered worthy of a name. Parentage is quoted as [('Arriba' x *sanderiana*) x *rosea*] which shows that Father is only known by his parents



Billbergia 'Bruddah Iz'
(Photo J Batty)

It was good to see the mix of oldies and newbies on display. Oldies because they have survived natural selection. Some hybrids from years ago just die out through neglect in someone's backyard but others beat the odds. Talking of oldies lets go back to 1988. This was when Werner Rauh obtained a plant from Domingos Martins in Espirito Santo, Brazil. This was described by Elvira Gross as *Billbergia domingosmartinsis* and compared to *B. distachia*. I find it interesting how in some case taxonomists compare their new plant with another species to get a number of differences rather than a closer species with less differences! So we know the plant was growing in Germany. In 1994 Harry Luther went into print to put this species under *B. vittata*. He did not even consider that the white spotted leaves merited it being treated at varietal level. Meanwhile back in the mid 1980's a plant had been acquired by Bob Whitman in Florida and thus Don Beadle. By 1988 he had crossed *B. domingosmartinsis* with 'Ed McWilliams' and was waiting for results. So by 1994 he was worried about his *B. domingosmartinsis* being called *B. vittata* according to Harry and this was where I came into the picture. While I did not take over Cultivar registration duties until 1998 we were in discussion mode and we agreed that the best option was to treat *B. domingosmartinsis* as a cultivar 'Domingos Martins' and register the name accordingly. While this was going on Don realised this was the best hybrid he had ever done and the name 'Hallelujah' was an appropriate name to use. Since then some 128 hybrids have been registered using 'Hallelujah' as a parent but none, in my opinion, have reached the standard of the original

It was certainly a surprise to see a *Wittmackia* on display to show that it does grow in South Australia. It was *Wittmackia brasiliensis* and a pity it had finished flowering. To show what you missed I have enclosed a photo of the flower taken by my Brazilian buddy Oscar. If you want to learn more this plant was first named *Ronnbergia brasiliensis* in 1985. Only recently did the genus get changed to *Wittmackia* because of findings in its DNA. I suppose we are lucky in Adelaide by not growing so many of these rarer genera because so many have had their genus name changed! By the way, *Wittmackia brasiliensis* comes from the state, Bahia so would be a bit iffy in Adelaide's winter



Wittmackia brasiliensis flower (Photo Oscar)

FESTIVAL OF FLOWERS



The event was held in April at St Paul's College, Gilles Plains. This was another very successful event which is great for networking & promoting our Society

It was again well attended with over 720 present by 2PM on Saturday, special thanks to our members who helped in various areas during the weekend in particular Julie, Dave, Pam N, Peter N, Penny, Sue H, Sarka and Annette, as a result our Society put in more than our share of effort & support. The Feature of a small combined display garden with a variety of plants from each group was very successful with many of the public spending time looking around the arrangement & taking photographs.

At the end, when all moneys were counted and expenses paid, each group received an eighth of the total money left over. **This year we received \$432.70 as our share compared to \$357.95** last year. Our sincere thanks again to the Festival of Flowers organisers *Bev*

Visit to Betty & John's Garden

The weather was chilly with many districts having showers throughout the day however the wood heater & several undercover areas gave those who attended respite from these seasonal conditions & opportunities to stroll around among the colour. Admiration & compliments were aplenty as the Brom collection was comprehensive & very colourful, the many different 'garden rooms' were laid out with meticulousness & imagination amazing & inspiring many of us.

It was incredible to see from a before photo the amount of work & consideration to layout completed in just 3 years, along with the quantity, variety & quality of the bromeliads collected in that time. Congratulations Betty & John, it is a credit to you & thanks for sharing this vision. *Bev*



One of the sections (photo Betty)



Another area (photo Betty)



I think Penny Seekamp did a fine job in awarding trophies won at the March Show. There were so many, and spread around growers. It would have been better if more of the newer members had participated but the door has been opened for the future. In the 1980's Margaret and I went to California to learn about and acquire Bromeliads. We looked at the competition tables and wondered why everyone seemed to win a prize. Was this the way to conduct a competition? My experience with Village Garden shows was from post World War II where entries were many but prizes few. Perhaps, trophies were too expensive but there were lots of entries. But things change over time. But then, we have loads of plants on our raffle table and yet I read newsletters in the USA where members are rostered as a supplier of a raffle plant.

We had a short but entertaining segment by Ray Clark. It must have been entertaining because of audience participation where all learned that being a Brom grower can be dangerous. Dangerous, because of hazards that are there unless you think about them and act accordingly. So we were reminded of electricity, soil mixes, pesticides etc which are great assets but should be used sensibly.

And so to the plant of the month –*Aechmea*, which dominated the display area. *Aechmea* is a wide ranging genus coming from central America to South America. At first thought I felt that the cold-tender ones predominated such as forms or hybrids of *A. chantinii* (and *A orlandiana* to a lesser extent) but I did notice the likes of *A seideliana* which comes from Rio de Janeiro area. Mind you, the name *A. seideliana* name has stuck ever since we got the plant some 30 years ago from Sydney even though it does not fit the formal description. One description of our plant could be that it looks like a less prickly *A. recurvata*!

Even the newest member will know that growing in pots is unnatural (who sees pots in the wild?). Pots are just convenient but some members like Kallam look at things a bit differently. The best way to grow a plant epiphytically (on trees) is to sow seed. This way, on germination roots take over to stop said plant falling off. But this takes years and it is quicker to use offsets which generally have a woody stem to be away from Mother. Many of us mount tillandsias by drilling holes and using glue to help them stay joined. So why not try an *Aechmea* or *Billbergia* or *Neoregelia*. It is just that your base has to be firm and stable enough not to fall over with the mounted plant. Kallam had nailed his *Aechmea* 'Ensign' plant securely and impressed others. So much so, he was awarded the most popular plant. To any who may follow this path just remember that your watering regime will need to change especially in Summer. This name has an interesting history which follows.



Aechmea 'Ensign' (Photo J Batty)

"AECHMEA ORLANDIANA VAR. ENSIGN by ERVIN J. WURTHMANN in Brom Soc Bull 20(4): 96. 1970 *Aechmea orlandiana* var. Ensign is one of the more strikingly beautiful bromeliads to enter horticulture in recent times. The variegated longitudinal banding on the margin of the leaves is a clean white with pink mottling when grown in good light.

This *Aechmea* had its origin in the greenhouse of E. W. Ensign of Orlando, Florida. A single variegated plant and three albino plants were first observed in a flat of *Aechmea orlandiana* seedlings in May, 1960. The albino plants subsequently perished. Growth of the variegated plant was slow and the first flowering was in 1966. This new addition to horticulture will remain rare for some time, as propagations are not possible from seed-only from offsets. It is not as generous in offsetting as its nonvariegated counterpart. Culture is essentially the same as for *Aechmea orlandiana*, requiring very good light but protection from intense midday sun. To the writer's knowledge, this is the only known variegated sport of *Aechmea orlandiana*.- Tampa, Florida.

The cultivar known as *Ae. orlandiana* 'Ensign' is indeed a beautiful plant! It is unique among variegated aechmeas in being bizarrely marked throughout both the green tissue and the white. It is my understanding that it popped up as a single individual among a group of normal seedlings of *Ae. orlandiana*. Can you imagine the excitement and anticipation this little variegated plant must have generated as it began to develop not only characteristic *Ae. orlandiana* shape and markings, but also pink and rose color within its white marginal areas! During the first several years after its release to the public, divisions sold for a hundred dollars and more each - a very tidy sum for a plant whose individual growing characteristics were still virtually unknown. But, this did not seem to matter. Everyone knew and liked the normal form of this species and, therefore, had to have this exciting, new form. It was snapped up by commercial men and hobbyists alike. From here on, in the hands of these persons, some seemingly strange things began to happen.

Now, it must be understood that the pattern in variegated plants may be stable, meaning that it will come true or repeat itself exactly in offsets; or it may be unstable. Further, it may be stable only some of the times! And this latter condition is what has prevailed in *Ae. orlandiana* 'Ensign'. Extensive and long-termed vegetative propagation began to give rise to mutations that, in almost every instance, have been inferior to the original plant. Permit me to explain the manner in which most of these mutations have come about. Bear in mind, though, that the original *Ae. orlandiana* 'Ensign' is itself a mutation or sport, to use the term loosely, that was derived from seed. In this cultivar, as in all variegated plants, there are two types of plant tissues, tissues of distinctly different genetic constitution. For example, there is green tissue showing the presence of food-manufacturing chlorophyll, and there is the variegated or albinistic tissue in which there is an absence of chlorophyll. All such plants with two distinct types of tissues are referred to as "chimeras". However, chimeras are not limited only to these two types of tissues in a single plant. For example, a plant having both diploid and tetraploid tissues is also a chimera. In fact, there may be numerous combinations of plant tissue types, all of which are referred to as chimeras. But, for this article, permit me to limit the definition of a chimera to that small area comprising the variegated plants. Let's focus our attention on a cross-sectional view of the stem of such a plant. Close examination would reveal a very thin ring of albinistic (white) or variegated tissue all around the edge, while the central portion of the stem shows up as green. This view represents the first of the three kinds of chimeras known as the periclinal chimera. Vegetative buds or pups resulting from such an area on a stem will give rise to a stable individual that ought to look like the original. As long as any cross-sectional view of the stem remains in this configuration, a plant of stable variegation can result from dormant buds situated anywhere along the stem. It is when this configuration on the stem changes or deteriorates, for one reason or another, that changes will occur in the symmetry of the variegated plant and in the pups produced. Just why some of these changes in configuration occur is, for the most part, still a matter of conjecture.

A second kind of chimera is known as the mericlinal chimera. In this situation a cross-sectional view of the stem would reveal that, except for a small segment layer of variegated tissue situated on or just beneath the outer skin, nearly all of the epidermal and inner stem tissue is green. As a consequence of this situation, very limited variegation can occur in the total plant or in a pup that might form from an axillary bud along the stem. The reason for this can readily be understood when we realize that, although we see vegetative buds as lying along the outer surface of a stem; in reality, they are deeply seated in the stem. As such buds become active to form a new plant, not only is the outer stem area contributing in the growth process, much of the internal tissue of the stem is also being duplicated for pup development.

The third kind of chimera is called a sectorial chimera. In this situation a cross-sectional view of the stem would reveal the variegated tissue in a configuration somewhat remindful of a wedge cut out of a pie. Not only is the variegated area confined to the edge of the stem (corresponding to the perimeter of the cross-sectional piece of stem in view), but also it is evident in some of the underlying tissue, the inner-stem area. In this kind of chimera the plant seems to be divided into sections, part with normal green tissue and part with the variegated tissue. Here again, the inner-stem tissue being sectored in the manner described, contributes to, and, therefore, influences the overall pattern of variegation in the plant and in all pups resulting from such tissue.

Neither the mericlinal nor the sectorial chimeras can any longer be considered identical to the original. Propagations resulting from such plants may never be identical to the original either. They ought not be called *Ae. orlandiana* 'Ensign' any longer, simply because their genetic constitution - the arrangement of their genetic material - has changed! In short, they have mutated further; they have degenerated; and they have become inferior to the plant we know as *Ae. orlandiana* 'Ensign'.

The only propagations of this plant that can rightfully be called *Ae. orlandiana* 'Ensign' are those that continue to remain true to the original - those that result from periclinal tissue. And, going a bit further, these are the only propagations that deserve to be sold under the original name. All distorted propagations ought not command a price anywhere near the proper forms. In fact, I wonder why anyone would be interested in such distorted plants at all unless he merely wanted to experiment in an attempt to recover something worthwhile from them. Well, perhaps the truth is that there has been an unsuspecting public - hobbyists and commercial people alike - who were totally unaware that anything was so wrong with these less-than-normal forms. It is unlikely that the original type could be recovered in subsequent growth from some of the chimeral forms that I have seen in various private collections. Several years ago I purchased a division of *Ae. orlandiana* 'Ensign' from Mr. Kelsey Williams for my wife, Susan. It was a true-to-type division. Though I did not know very much about *Ae. orlandiana* 'Ensign' at the time, everyone remarked how large and strong her plant was. The leaves held their position well, the lower and middle ones did not droop as so many do, and the green area in the leaves was centrally located in every leaf. In short, it was a very nice division. Through the years propagations from it have remained stable, and I have removed as many as five and six one-third-grown pups from several divisions - all from the single ramet purchased years ago.

Well, what do the mutated forms from *Ae. orlandiana* 'Ensign' look like? For the most part, many can be spotted immediately by their lack of balance in the variegation as you look down onto them from directly above. If one side or section of a plant has a disproportionate amount of either white or green, the division is more than likely degenerating. If several leaves to one side of the plant do not show the green tissue centrally, but, instead, some leaf blades are divided green on one edge while white on the other; then such plant may be degenerating. A third type of degenerative mutation is exhibited by the center of the plant going all white, or all green. Two additional mutated forms are found popping up, also: they are the totally green plant with no variegation whatsoever, and the totally white or albinistic plant. Now, these two latter forms can no longer be called chimeras, since they do not possess two types of tissue, though they may come from a parent that is a chimera, and, more than likely, a sectorial chimera. They result from buds on the stem of the mother plant where there is a total absence of one or the other type of chimeral tissue. I would remove and discard all such pups just as soon as it could be determined that they will not develop into the normal type. In this way the strength of the mother would go immediately into production of more pups, and, hopefully, one or more will come from an area along the stem that had normal variegation so they could be true to the original.

I have also seen some very narrow-leaved and thin-stemmed forms of *Ae. orlandiana* 'Ensign' that were normal in their variegation pattern. Unless this stunted appearance is the result of a further mutation, a debilitating sickness, a virus or the like, that I am not familiar with; I suggest that these poor-looking plants may just be starving in a very poor growing medium. I should like to see them shifted into a richer compost or into osmunda, or fed properly to determine whether they could become more vigorous.

Frequently I am asked whether pups will come true to the mother plant. Theoretically, since a pup is a vegetative extension of the mother plant, it ought to be identical to the mother in its genetic constitution. Well, from the above discourse on the many mutations of *Ae. orlandiana* 'Ensign', one can see that such is not necessarily true, since much depends on the plant involved. Even where the mother plant is not a chimera, mutations may occur. They may be brought on by variations in environmental and cultural conditions, chemical treatment, radiation, insect vectors, and still other things.

While the great majority of mutations that have occurred in *Ae. orlandiana* 'Ensign' have been degenerative and inferior to the original, let me point out that a great many mutations among horticultural crops of all kinds have been superior to many originals or at least as fine.

Since I have covered the degenerative mutations of *Ae. orlandiana* 'Ensign' pretty thoroughly in order that everyone might be more cautious about the purchase, propagation, and exchange of all such plants; I feel that it is only fitting to say that there is a form in reverse to the original *Ae. orlandiana* 'Ensign', whose leaf edges are green and the white band is central in the leaves. Though I have not seen it, and, therefore, would not care to endorse it; I hope that it proves to be reasonably stable, and that it is a willing grower."

Plant names are interesting and while some growers concentrate on growing conditions I love delving into their history. For example there was one plant called *Aechmea nudicaulis* 'Red' although not in flower it reminded me of an old Latinised name 'Rubra' which in turn reminded me of 'Xavante'



Aechmea 'Xavante' (Photo J Batty)

Reading follows.

“Cultivar Corner 2003 by Butcher

Aechmea nudicaulis

This is a very popular species. Did you realise there are 8 accepted varieties? You may know that I love doing Keys to help me understand how species are linked to each other and what traits tell them apart.

I had great difficulty with the varieties of *Aechmea nudicaulis*. Harry Luther came to rescue when he said I would be wasting my time! These are the botanists problems but there are clear identifiable cultivars and these can be referred to by their Cultivar name in the Bromeliad Cultivar Register. There is one that is very popular with Bromeliad growers that is distinct but has not been formally described and yet everybody knows it as *Aechmea nudicaulis* ‘Rubra’ or *Aechmea nudicaulis* var. *rubra*. In effect it falls in the gap between a cultivar and a botanical variety by being not acceptable under either ICNCP (International Code of Nomenclature of Cultivated plants) or ICBN (International code of Botanical Nomenclature) rules. It is not in the Cultivar Register and it is not in the Binomial Listing. I think you will all agree with me that this situation should be remedied. At this late stage I cannot see any botanist bothering to describe this plant properly under their ICBN rules. This form is found in the wild in Brazil and I have discussed this anomaly with my friend Oscar Ribeiro of Bromeliario Imperialis in Rio de Janeiro. Apparently there are native tribes in Brazil whose members on ceremonial occasions, paint themselves red. One of the larger tribes is called ‘Xavante’ and while there is no direct link in ethnobotanical terms it does seem an apt name. I realise this will mean you changing your label but it will solve a problem and we will have a photo in the Register for identification purposes. There is the problem that ‘Rubra’ will continue to be used, but, at least there will be links in the Register to point enquirers in the right direction if they wonder about identification. So remember the name is either *Aechmea nudicaulis* ‘Xavante’ or *Aechmea* ‘Xavante’.”

Another name that caught Julie’s eye was *Aechmea* ‘Pico’ especially when the owner mentioned ‘Black on Black’. Reference to the BCR was not much help but did give us food for thought. Both have similar parents and if we went solely on photos you would say that the plant was really ‘Black on Black’. We now enter the murky waters of ‘Provenance’ so important to the Art world. What were the origins from the USA of this plant? From the narrowness of the leaves I would feel happier if it were called ‘Black on Black’ but I am not 100% certain.



Aechmea ‘Black on Black’. (Photo J Batty)

We must not forget Julie’s pineapple which caused comment but shows that fruiting can be done in Adelaide even though it is easier to visit the local greengrocer. It should remind us that other Bromeliads do produce edible fruits and with irritating seeds. To me it shows how long man has been growing *Ananas* to select out the seed so they are really Cultivars

Research project

There were about 30+ plants bought in comprising of several genera’s: Alcantarea, Billbergia & Neoregelia, members were thanked for their participation & bringing in these plants.

This project is an education/ study process not a competition and is already demonstrating the different soils/growing techniques & conditions within the short time frame of 6 months from potting, also these plants haven’t gone through winter or summer as yet even so at this stage there were many comparisons possible e.g. 3 or 4 Neoregelia ‘Palmares’ and 2 Neoregelia ‘Hot embers’ highlighted hours of light, height grown at, growing situation. & watering practices. The Alcantarea’s can be affected by weather conditions & will colour up as it gets warmer & there’s longer periods of light.

It was noted that our hours of sunlight are approx 5+ compared to Queensland 10. Billbergia are shallow rooted & it was suggested best grown in non squat pots to assist with stability. Well done & thankyou Kallam there was much to learn for beginners as well the more experienced growers. Next presentation January 2020.



Kallam discussing the project plants (Photo J Batty)

STOP PRESS! July 14th



This is expected to be a low key, friendly get together with a catered luncheon. The Christmas in July celebration will include a garden related auction, so please bring in these items so we can have some fun whilst raising money for our Society.

Early start 1230PM

The lunch will be served at 1PM: BYO DRINKS & GLASSES
All financial members' meals are being paid for with BSSA funds, non members are \$20each. Our deadline for notification of attendance is now 1st July 2019.

Menu: Spit Roast Beef, Lamb & Turkey along with roast potatoes, peas, baked pumpkin & Cauliflower au Gratin.

Sweets: Apple Pie & cream, Pavlova. Fresh fruit salad & cream.

There will be **NO MEETING, NO DISPLAY PLANTS, RAFFLE OR DOOR PRIZES** so please do not bring in any of these. *Bev*

Gazette

S.A. BROMELIAD GAZETTE

Members are encouraged to contribute to this 3 monthly gazette as a method of learning about bromeliads by sharing triumphs, challenges and disappointments etc

Notice Board



When members are looking for a Bromeliad to purchase or swap we have a board that facilitates informing those at meetings. Please give details to Bev or any Committee member. *Bev*

Suggestion Box



This was introduced to encourage members to put forward ideas for meetings, any other item of interest or concern. We appreciate your input & feedback.

Thanks *Bev*

Dates for your diary



- ✓ Down the Garden Path – Mt Barker 24th & 25th August 2019
- ✓ Home Show & Outdoor living 11th to 13th Oct 2019
- ✓ Begonia & Fern Spring Show 19th Oct 2019
- ✓ Spring Salvia sale October 27th 2019
- ✓ Herb day November 3rd 2019
- ✓ Bromeliad Society show & sales 2nd & 3rd November 2019