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

Edition: March 2025

<u>Agenda</u>: General Discussion

Venue:

PineGrove Bromeliad Nursery 114 Pine Street Wardell 2477

Phone (02) 6683 4188

Study Group meets the third Thursday of each month

Next meeting April 17th 2025 at 11 a.m.

Editorial Team: Ross Little Helen Clewett

pinegrovebromeliads@bigpond.com

Life Members: Gary McAteer, Coral McAteer Debbie Smith, Shirley Smith Ross Little, Helen Clewett



Statements and opinions expressed in articles are those of the authors and are not necessarily endorsed by the Group. Articles appearing in FNCBSG NewsLetters may be used in other Publications on request and provided that the source is credited. Use of articles on social media platforms only with written consent for past present or future articles.

# Meeting February 20th 2025

The meeting was opened at approximately 11.00 am The nine members were welcomed. Six apologies were received.

## **General Business**

It has been agreed that the 'Monthly Genera' Popular Vote competition section will be decided upon meeting to meeting or at least advised via e-mail or phone contact prior to the next meeting. We are going to try as much as possible to conduct our 'Monthly Genera' as a genus comparison to help members to be able to distinguish closely related genera more easily. For example in February we discussed the distinguishing features of Vriesea compared to Guzmania. Our March comparison will be Neoregelia and Nidularium and perhaps we should then compare Nidularium to Canistropsis in April.

Shane did a wonderful job of creating an advertisement which can be posted on local garden clubs etc face book pages. Some minor changes were suggested that have been addressed to make the add more generic. The template of flyers that are handed out when members attend local markets are to be made generic also. All contacts now are by phone to Ross, Shane or Kayelene.

When reviewing our February Newsletter about fertilizing some interesting points were raised: How often and how much do you use on the plants? What are some recommended fertilizers for our area?

For foliar feeding: Thrive Fruit and Flower (has lower nitrogen %), Thrive, Aquasol, Seasol (tonic) and Power Feed have all been found to be safe on all Bromeliads. Try to be consistent with your foliar feeding otherwise noticeable growth spurts will occur. Apply thoroughly until water/fertilizer is overflowing from the plants central cup and leaf axils into the potting medium.

Slow release fertilizer: Osmocote Exact Hi-K 8-9 month or Nutricote 8-9 month. When adding slow release fertilizers to your plants/pots especially newly potted pups **do not** put any fertilizer prill (balls) in the central cup of the plant, it should only get mixed into or sprinkled on top of the potting mix. After removing pups a few fertilizer prill can be put into each leaf axil of the **old mother plant only** (not in the pups), this will help that old mother plant produce another round of pups more vigorously. But how many do you need *!!!* 

The preferred fertilizers for most Bromeliads are higher in Potassium (K) with a lower level of Nitrogen (N). For Vriesea, Guzmania, Alcantarea, Cryptanthus, Dyckia etc. a fertilizer with a more balanced NPK is suitable.

## Fertilizer Confusion by Les Higgins (FNCBSG NSW Newsletter March 2013)

American nutrient recommendations often create confusion in Australia. Fertilizers with values such as 10:32:20 are unavailable. The difference in American and Australian fertilizer calculation relates to the early manufacturing methods of phosphorus and potassium. The traditional American fertilizer formula is the "Oxide Potential". This is a cumbersome system with oxygen "O" included in the calculation. Increasingly Americans use the simpler Imperial/ Australian system and thus still further add to confusion from America.

The Australian fertilizer system is known as the "Elemental Value". The nutrient analysis is expressed as the ratio of three major elements: **N**itrogen : **P**hosphorus : Potassium (**K**) and this is abbreviated to N:P:K.

American Oxide Potential is the ratio of the available nitrogen, given as N : available phosphorus, given as a percent  $P_2O_5$  (phosphorus pentoxide) : available water soluble potassium given as a percentage  $K_2O$  (potassium oxide). Confusingly the Americans often refer to this ratio of N: $P_2O_5$ : $K_2O$  as NPK. Most of the rest of the world refers to the ratio NPK as NPK.

Confusion increases as  $P_2O_5$  and  $K_2O$  are no longer popular ingredients in American fertilizers. Further confusion occurs when phosphorus pentoxide ( $P_2O_5$ ) is misidentified as phosphate ( $H_2PO_4$ ) and potassium oxide ( $K_2O$ ) as potash (potassium carbonate  $K_2CO_3$ ).

To convert American P ( $P_2O_5$ ) values to Australian P (P as elemental P) multiply  $P_2O_5$  value by 0.44.

To convert American K ( $K_2O$ ) values to Australian K (K as elemental K) multiply  $K_2O$  values by 0.83.

America's "balanced fertilizer" is a nutrient package which presents all three major elements as the same numerical value. The very popular American "balanced fertilizer" of 20:20:20 is readily available throughout that country. 20:20:20 recalculated  $N:P_2O_5:K_2O$  to NPK becomes 20:8.8:16.6. In Australia there is no fixation on all the numbers being equal and 20:8.8:16.6 would be a very rare nutrient specification. The problem with the "Balanced" fertilizers is that the amount of phosphorus is much higher in relation to the amount of nitrogen and potassium than bromeliads need. The numbers are balanced but the nutrients required by the plants are not.

To avoid confusion, before purchasing a fertilizer pack read the information given in the guaranteed minimum analysis. Does it state  $N:P_2O_5:K_2O$  or NPK? Is the presentation three equal value numbers? For bromeliads, using the N.P.K system, K should be the biggest number with N second and P as a small value.

# **Open Popular Vote**

1st	Shane Fitzgerald	Cryptanthus zonatus
2nd	Ross Little	Catopsis compacta
2nd	Deb Baker	Goudaea chrysostachys
2nd	Keryn Simpson	<i>Guzmania</i> 'Daniella'

# <u>Tillandsia</u>

Tillandsia ionantha
<i>Tillandsia</i> 'Samantha'
Tillandsia straminea
Tillandsia jalisco-monticola
Tillandsia latifolia

# Monthly Genus – Vriesea and Guzmania

1st Shane Fitzgerald Vriesea 'Stars and Stripes'

# **Judges Choice**

1st Shane Fitzgerald *Cryptanthus zonatus* 

# Web Links for Checking Correct Identification and Spelling ?

Bromeliad Cultivar Register (BCR): <u>http://registry.bsi.org/</u> Refer to this site for correct identification and spelling of your hybrid or cultivar.

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

New Bromeliad Taxon List : <u>https://bromeliad.nl/taxonlist/</u> Refer to this site for latest species name changes and correct spelling.

Bromeliads in Australia (BinA) http://bromeliad.org.au/ Refer to this site for its Photo Index, Club Newsletters many with Table of Contents Index and there's Detective Derek Articles.

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

# Where do I Find the Dates ?

www.bromeliad.org.au then click "Diary". Check this site for regular updates of times, dates and addresses of meetings and shows in your area and around the country.

# xVrieslutheria 'Kent's Sunset'

compiled by Ross Little

This beautiful hybrid bred by J. Kent was originally registered as *Vriesea* 'Sunset', parentage being: *Vriesea sucrei* x *Vriesea splendens* var. *formosa*.

To save some confusion the name 'Sunset' was later changed to *Vriesea* 'Kent's Sunset' to differentiate it from *Vriesea* 'Sunset' bred by John Arden which was changed to *Vr.* 'Arden's Sunset'.

In 2016 M. Barfuss and W. Till published a taxonomic revision of the Bromeliaceae subfamily Tillandsioideae in Phytotaxa based on a multi-locus DNA sequence phylogeny and morphology. This study created the new genus of Lutheria: flowers distichously arranged, often secund, appearing at one side of the inflorescence.

Based on these DNA studies *Vriesea splendens* var. *formosa* was transferred to the newly created genus of Lutheria, named in honor of Harry Edward Luther (1952–2012).

Therefore we now have a Vriesea crossed with a Lutheria which gave rise to a new nothogenus: xVrieslutheria.

Long story short, Kayelene's *Vriesea* 'Kent's Sunset' is now:

xVrieslutheria 'Kent's Sunset'.

From BSI Glossary 3rd ed. 2022 Nothogenus: A name at generic level for a hybrid between two or more species in different genera, customarily preceded by a multiplication sign (x).



x*Vrieslutheria* 'Kent's Sunset' grown by Kayelene Guthrie

# Monthly Genus for February was Vriesea and Guzmania

Many Vriesea have plain green foliage, these are mostly grown for their colourful inflorescence. Then there are the foliage Vriesea with their beautifully marked with large irregular dark green or purple transverse banded patterned leaves of hieroglyphs. In recent times we have seen the introduction of white and brightly



Vriesea 'Stars and Stripes'

1st Monthly Genus Shane Fitzgerald

coloured leaves and some with stretch patterns.

The leaves of all Vriesea have smooth edges - entire (without spines).

Vriesea can have either a simple (of one piece, single unbranched) or compound (once, occasionally twice branched) inflorescence.

The floral bracts are lax (loose) to imbricate (overlapping), flowers are usually distichously arranged (arranged in two ranks), they're rarely spirally arranged.

The sepals are symmetric and usually free, the petals are yellow (often with green lips), cream, brownish (-red) or rarely white, short connate (united or joined) at the base or rarely free, they form a tubular or campanulate (shaped like a bell) corolla (petals of the flower), the petals bear appendages (nectar scales).

Seeds with a distinct appendage at the apical end (the growing tip).



Vriesea unknown Dillings hybrid grown by Kayelene Guthrie



A distichous (two rank) Vriesea inflorescence showing a bell shaped, green tip yellow petal with exserted stamen (the pollen bearing male organ) and stigma (the female part of a flower that receives pollen).

Petal

with nectar scales

How can you tell a Guzmania when you see one? There are some outstanding features that separate them from Vriesea.

Guzmania must have entire (smooth edged) leaves. There are no spiny edged leaves in Guzmania, the leaves are generally glossy, the plants are generally in the form of a many-leafed rosette. In most species there are fine longitudinal brown or maroon lines, showing faintly or strikingly in the leaves, usually most evident near the base of the leaves.

The inflorescence may be simple or once to triple branched, it can be on a tall peduncle or sunken in the leaf rosette, it may be cone-like while others are on long spikes with short compact branches or long open branches. One character in Guzmania that a layman can see easily is that the flowers are always in more than two rows, spirally arranged - spirostichous, while in Vriesea they are in exactly two rows - distichous.



Cone-like *Guzmania* andreettae

*Guzmania sanguinea* sunken in the leaf rosette.

blades, without basal appendages (naked). The petals should be joined together not fused, a "good glue job" says Lyman Smith.

All Guzmania have plumose seeds, fine hairs - papus (parachutes) that are feather like so they can float on a current of air, these are generally brownish.





naked petal



Colourful bracts of Guzmania lingulata

azmania dreettae nia in the ette.



*Guzmania '*Daniella' grown by Keryn Simpson

The sepals are symmetric and will be fused near their base, the petals can be white, yellow or green, more than 1/4 of their entire length is conglutinated/connate into a short or long tube, the tips recurved or occasionally cucullate, rarely with enlarged



*Tillandsia ionantha* 1st Tillandsia Gary McAteer *Cryptanthus zonatus* 1st Open and Judges Choice Shane Fitzgerald



*Tillandsia* 'Samantha' 1st Tillandsia Kayelene Guthrie



*Tillandsia straminea* grown by Deb Baker

*Tillandsia jalisco-monticola* grown by Shane Fitzgerald The *Catopsis compacta* on our competition table this month raised the question about some Bromeliads being dioecious: the male and female flowers on different individual plants.

"Nearly all Hechtia species are dioecious and that one exception (*Hec. gayorum*) is almost dioecious (in the sense that there are a few bisexual flowers on plants that are otherwise unisexual). By contrast, only a handful of other bromeliad species are dioecious, notably *Androlepis skinneri*, *Aechmea mariae-reginae* and a few species of *Catopsis*". (Doug Binns)

Male plants tend to have more flowers per plant and flower for a longer period than female plants. Male plants often appear to be smaller and have smaller flowers than female plants.

#### What to look for:

A **male** flower only has the six stamen which is comprised of the filament and anther (the pollen bearing part).

A **female** flower only has the pistil, the ovule-bearing and seed-bearing organ, consisting of ovary, style and stigma (the top of the pistil that receives the pollen).





Catopsis compacta grown by Ross Little







Goudaea chrysostachys grown by Deb Baker



**Goudaea** W. Till & M. Barfuss, *gen. nov.* Phytotaxa 279(1): 001-097. 2016.

*Goudaea chrysostachys* prior to DNA studies was a Vriesea. It is found growing terrestrially and saxicolously in savannas and epiphytically in woods in Trinidad, eastern Colombia and Peru.

Named in honor of Eric John Gouda (1957–) from Utrecht, The Netherlands, long-term researcher in Bromeliaceae.

H. Luther commented in February 2012: "The smaller plants from Ecuador to Bolivia I call *Vriesea chrysostachys* var. *stenophylla* (ed. now a Goudaea). Bracts can be yellow, orange or red; corolla creamy white to pale yellow. Probably not a strong variety, another case of little'uns and big'uns across a big range of territory."

Deb's plant appears to be this smaller form, therefore is possibly:

Goudaea chrysostachys var. stenophylla.

Orange form grown by Ross Little

### Bromeliads - Houseplants for Today and Tomorrow Part 6

by Walter Richter (Translated by Adda Abendroth, Teresopolis, Brazil) Continued from: BSI 1967 V18 (1)

"In sunny surroundings it grows like a ball, its arched leaves curved back, their tips entangled with one another. In the shade the plant has stretched-out leaves and looks entirely different. Big black ants make their home in the nooks between the sheaths. Interesting also is the little grey *Tillandsia pruinosa*. It has a bulging base and fleshy, back-curved leaves. Pretty *T. filifolia* has fine, grass like leaves irradiating from a rosette-like base. It is quite common, as is also *T. vestita*. Veritable cushions of *Catopsis morreniana*, a small yellowgreen soft leaved bromeliad, sit on thicker branches. *Tillandsia juncea, T. festucoides, T. tricolor, T. fasciculata*, and *T. utriculata* inhabit all the trees, as do several Aechmeas. One of the Aechmeas has an enormous funnel that can hold at least 10 to 20 liters of water.

Extraordinarily abundant are the Tillandsias along the edges of shallow grooves in the ground where water lingers for some time. Trees on the margin are literally overloaded with them, especially with *T. filifolia* and *T. vestita*, proving that evaporation from the pools benefits them. Temperatures are about the same as in the upper savanna. In winter it rains, but in summer the rainfall is heavier. The fog from the barrancas also brings plenty of humidity. The semi-dry forest gradually changes into evergreen rain forest, which at above 1,300 meters mixes with deciduous trees, and eventually becomes a summer green forest and fir tree region, ending with pines (*Pinus hartwegii*) at 3,900 meters.

Light in the dense virgin forest is always dim, and the air is humid and sultry. Woody plants and herbs cover the ground. A mass of creepers fills empty spaces. Epiphytes also abound — there is no limb without its garment of aroids, ferns, bromels and orchids. The epiphytic colony in the inner forest is entirely different from that in the tree tops. Down below live plants that thrive in moisture and shade; high up settle the xerophiles and they that need much light, a fact that can be easily checked on a freshly felled tree. The bromels here are all soft leaved cup-rosettes, mostly a beautiful red.

It is in the higher forests, along the edges of virgin forest, and on the shade trees in coffee plantations that we find most of the epiphytes which in the virgin forest live in the tree tops. Even the coffee shrubs and the trunks of *Yucca elephantipes*, planted to serve as live fence posts, are profusely inhabited. The sparser the foliage in a tree crown, the more Tillandsias and orchids are to be found, whereas dense foliage, such as that of mango trees, keeps out such inhabitants. On thick moss-coated branches where humus accumulates, grow two Crassulaceae, the glorious, red-blooming *Echeveria carnicolor*, and *Sedum botteri*. Bromels are very numerous. Some trees are thickly covered with *T. juncea*, *T. tricolor*, *T. vestita*, whereas *Catopsis stenopetala* and *Tillandsia filifolia* prefer the coffee trees and other shrubs. The curious *T. butzii* and *T. punctulata* are more common in higher altitudes.

Temperature in this area fluctuates in winter, and there is occasional light frost at night. It harms coffee and banana plantations, but on the whole, frost is rare. Rain is fairly common also in winter, and when the "nortes" blow, the temperature drops to 9 -12°C for several days. The air is always very moist, especially so at night."

I have cited this comment in detail because it is so explicit. Of special interest is the presence of epiphytic bromeliads in dry areas, in regions where we would think only earthbound plants could possibly find survival. The species that live here have adapted to surrounding conditions. The following description shows the high resistance of certain bromeliads to drought. The site is the "Monte" formation in the eastern Bolivian Chaco plains. This is a thick forest region, rich in thorny plants and succulents.

Thomas Herzog writes the following: "The ground is covered with an almost gapless coat of bromeliads that have stiff leaf rosettes. Two species prevail: *Bromelia serra* and *Aechmea polystachya*. The former has long, narrow, toothed leaves which make a rather coarse fibre and is used for ropemaking. This species prefers shady sites where it forms dense thickets in spots not subject to floods and practically defies penetration by humans. *Aechmea polystachia* grows as underbrush only in the thorny forest. Its leaves are much broader, have a smooth edge and a blunt tip. It is able to store rain water in its tightly overlapping leaf sheaths for a long time. Description of the Monte formation would not be complete without mention of its richness in epiphytic bromeliads. Probably nowhere else do they play such an important role in the landscape. Especially one type having gorgeous violet-blue flowers, *Tillandsia streptocarpa*, clad in silver-gray scales, curls its leaf tips around twigs in such masses as to weigh the host down".

#### **Miscellaneous Considerations**

In order to start at the very beginning I would like to preface all details that are to follow with a few considerations about the importance of a correct general attitude towards bromeliads on the part of the cultivator. In the first place, every grower of a bromel and everyone who is going to deal with these plants should bear in mind that bromeliads are tropicals and that they should be treated as such. It means that they have definite temperature requirements. The amount of warmth they demand varies depending on the climate they come from. Their adaptability in this connection is remarkable. Actual temperature in degrees will be given later.

Like all other plants, bromeliads need light. We should not treat them as we would a piece of furniture, placing them where it suits us, at least not if we expect the plant to thrive, to grow, and to bloom. We cannot count on that to happen in a dark corner, away from a window. A place in the window or near it is always right. Only direct southern windows getting much sun are unsuitable for certain species.

The leaves of most bromels form a funnel; it is a natural water deposit for use in period of drought the plants must live through in their homeland. They depend on the water accumulated in the funnel; they live on it, even in captivity — what I feel tempted to call the inside of a human habitation as compared to the great outdoors. What happens there may benefit the plant, but it may also destroy it. One can almost say the same thing of cultivation indoors. Care and good cultivation tactics can make a plant thrive, but they can also kill it. How many times have I seen it happen that even the most detailed instructions are of no avail if their application is not geared to the individual plant! We should always remember that a plant is a living being; it breathes, it rests, it is thirsty or hungry. Dealing with my fellow humans I divide them into those who comprehend this and act accordingly and those who will not or cannot understand.

Special attention should be devoted to watering. It is correct to say that a certain bromel should be watered every two, three, or five days. How often a plant should get water depends on many factors that influence the plant. We cannot explain them all at this stage, but the term "conditions of environment" covers what affects the plant and thereby determines its inner and outer development. These factors apply primarily to the wild plant, but in a certain sense and with diversification also to the surroundings offered indoors. Alongside water in the funnel, or rather the water in the leaf sheaths which should always be present, all bromels love humidity in the ground, but on the other hand they do not like the ground to be soggy or too dry.

By far the majority of bromeliad growers cultivate their treasures in pots. This practice in no way exhausts the bromels' inborn possibilities to serve as ornaments. If I submit my predilection for these plants to rigorous scrutiny I must admit that it was their epiphytic way of life that prompted me to give them close and intensive attention. Their peculiar shape and their intricate way of life enthrals me to this day, and I know others have experienced a similar feeling. The possibility of cultivating a bromel as an epiphyte, even indoors, better still in a window, certainly is a challenge to the plant lover. The arrangement provides a decorative feature and permits study at close hand of progressive development. Some species of bromeliads are extraordinarily hard and resistant. A friend of mine living in Bern cultivates a number of species during the warmer months on a protected southern balcony with great success. You may comment that Switzerland is situated considerably further south than Germany and that it has a different climate. Of course this is true and plays its part. I deeply value sunshine and appreciate how much it can do for a plant. On the other hand, I am convinced that in Germany as a whole an equally beneficial climate prevails in many spots that would permit similar results. But I must stress the fact that a compatible environment is a prime necessity and further that only bromels coming from certain climates will be able to adapt. Bromels from the rain forests are unsuitable, but those that normally live in deserts or in semi-deserts (those that are used to a hard life) will do well in the open. In the beginning, it is necessary to make the plants get used to their new life and the greater light intensity little by little. But the bromels like it; they, put on better color and grow up more compact, if slower, than indoors.

As a gardener I have experimented in various ways in this connection. Neoregelia hybrids were cultivated from the end of May to the end of September in an "early box-bed" without glass. Entirely unprotected cultivation outdoors did not seem advisable in the rather rough climate of my hometown; the sides of the boxes offer at least a little protection. The plantlets continued to grow satisfactorily and showed - especially as the nights got cooler — a tendency to darken their leaves intensively towards violet-black. The dark coloring remained for some time after the plants had been removed to the glass-house as night frosts set in. Some of the plantlets that had been left out in the boxes on purpose perished of cold only when the temperature dropped to 3°C below zero. The hardening influence of the outdoor summer must have played its part.

The same cultivation process was tried with different Billbergia and Aechmea species. Most of them proved quite resistant. Some did not change the color of their leaves, but growth was stouter and shorter - hardier all over. Good results in the open were also obtained with Tillandsias. We know that some species come from high mountains where the climate is harsh. This kind of treatment, though, would certainly harm any characteristic tropical plant. Experiments of this kind, and their conclusions, are of a comparatively recent date and in no way as yet common knowledge. It might entice a plant lover to carry them on.

To be continued .....