

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

Edition: February 2020

Agenda: General Discussion

Venue: PineGrove Bromeliad Nursery
114 Pine Street Wardell 2477
Phone (02) 6683 4188

Study Group meets the third Thursday of each month

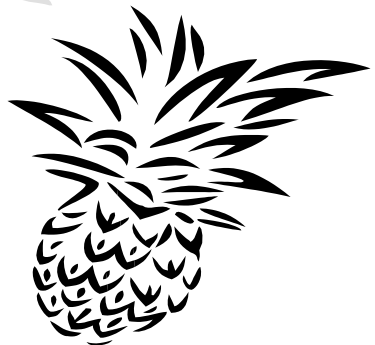
Next meeting 19th March 2020 at 11 a.m.

Editorial Team:

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Meeting 16th January 2020

The meeting was opened at approximately 11.00 am
The 14 members present were welcomed.
A total of two apologies were received.

General Business

Ross gave a warm welcome to all attendees and a special welcome to three newcomers Dot, Merle and Kaylene.

For the benefit of our newcomers Ross and members of the Group explained how our Study Group operates. Topics discussed included: monthly attendance cost, tea, coffee, amenities, Newsletter, library, raffles, competition entries, plant sales and commission to Group etc.

The annual election of offices took place with the following results:

Group Leader: Ross Little

Newsletter Editor: Ross Little

Editorial Team: Helen Clewett
(proof readers) Drew Maywald - minutes
Michelle Hartwell
Ross Little

Librarian: John Crawford

Sales: Coral McAteer
Dave Boudier

Raffle: Coral McAteer
Debbie Smith

Banking: Debbie Smith

A review of our January Newsletter was given by Ross. The Bromeliaceae booklet mentioned in the December Newsletter will be sold in hard copy which will be available in a couple of months, as Drew is still adding the finishing touches to it.

The article on 'Fragrance in Bromeliads' was published for the benefit of Sue, one of our keen Tillandsia collectors who was absent from the meeting.

Ross again made an appeal for articles and items of interest for the Newsletter and reminded members that the editorial team can help anyone who would like to contribute an article to the Newsletter.

Show, Tell and Ask!

Ross mentioned that we were going to go back to basics and discuss a number of topics to help growers look after their plants better. So please let us know what topics you would like discussed.

John spoke about suitable glues for mounting bromeliads and said that E6000 was recommended to him by the supplier of Tilly Tacker which is only available in the US. However, he said that E6000 comes in several forms and you can also get it with a very fine metal tip, which reduces wastage. The thicker glue is far easier to use and less messy than very runny glues. E6000 and Super Glue both come in a gel form which is ideal for mounting bromeliads.

The Group were reminded not to use glues that have any trace of copper or silicon in them as the copper and silicon will kill your plants, and not to use water-based glues like PVA, as the glue will dissolve in water/rain.

Ross spoke about scale and reminded the Group that plants with scale must not be brought to competitions or as raffle prizes without removing the scale or spraying it prior to bringing it to the meetings.

All scale (black, brown etc) can be removed with a tooth brush or by spraying with a suitable insecticide like Confidor or similar products (e.g. Spectrum 200) that contain the active ingredient Imidacloprid. It is best to spray in the early morning or late afternoon when bees and butterflies are not active as it is alleged that Imidacloprid is harmful to them.

Doug Binns, said that he uses white oil on his bromeliads with no harmful effects to his plants. He found that Confidor will kill scale and bugs but not mites like the red spider mite which white oil will. He uses a commercially available petroleum based white oil.

However, other members have found petroleum based white oil can be harmful to bromeliads, although a canola oil based white oil can be used.

Refer: FNCBSG Newsletter October 2019 for recipes for Canola based white oil.

FNCBSG Newsletter April 2011 Canola White Oil "Oils ain't Oils Soll !".
by Rob Smythe Msc.

FNCBSG Newsletter July 2014 "How to Make Canola Oil Spray"
compiled by Aaron Smythe.

Experiences with petroleum based white oil is that it will take up to five days to break down, while canola based white oil will only take one to two days to break down. The risk is that the petroleum based white oil will stick the trichomes down on the leaf surface not allowing the plant to breathe, hence suffocating it.

Ross mentioned that Mealy bugs were a big threat to Bromeliads. There are a number of ways to deal with Mealy bugs including:

- Spraying with a fungicide.
- Spraying with vinegar.
- Applying Diatomaceous Earth to the soil around your bromeliad.
- Mixing Diatomaceous Earth into your potting soil which will not only kill mealy bugs but also root mealy and ants in your pots.

Refer: FNCBSG NSW Newsletter May 2014.

- Putting coffee grounds around the base of your plants.

John led a discussion on the use of household cinnamon as a fungicide, particularly when removing pups. Dust any cut surfaces of pups and the mum with cinnamon before re-potting. It is best to leave the plant for 24 hours before potting but that is not necessary.

To sterilize a seed raising mix or to combat algal, fungus growth or damping off on seedlings use Milton tablets sprayed on the mix and seed and or seedlings.

The Group discussed the best potting mix to use. Because most Bromeliads are epiphytic the roots are used predominantly as a hold fast rather than to source nutrients, therefore it is best to use a free draining potting mix as a base. Most growers have their own secret Bromeliad potting mix recipes but they all start with a free draining mix as most Bromeliads do not like wet feet. If the base mix dries too quickly one can add coco peat chunks or more composted fines to help retain more moisture longer. If one finds the base mix is too wet for their conditions simply sieve out some fines leaving the mix coarser, or simply water less.

Ross led a discussion about growing plants from seed and the different types of Bromeliad seed one will encounter.

Genera in the Bromelioideae sub family have berry like (baccate) seed mostly dispersed through animal droppings.



Genera in the Tillandsioideae sub family have plumose seed, the papus or coma hairs aid in wind dispersal also for securing the seed to rough surfaces.



Genera in the other 6 sub families have winged seed which flutter away on the slightest of breezes.



Growing a Bromeliad from seed can take some time before it flowers, a lot of patience is required. Here are some rough estimates (guide only) of time from seed to flower of firstly berry type, secondly plumose and thirdly winged seed:

- Aechmea, Billbergia, Neoregelia, Nidularium can take 2 to 3 years.
- Alcantarea, Guzmania, Tillandsia, Vriesea can take from 3 to 25 years.
- Dyckia, Encholirium, Hectia, many Puya 3 to 15 years.

Keryn reminded the Group that it was important to always label the seed you have collected immediately and on planting or you will forget what they are.

Ross showed examples of seedlings he is growing to demonstrate that they may not be true to type/pattern. For example, all the seedlings he showed lacked the variegation of the parent plant. The colour pattern of a parent will not always be evident in seedlings as shown by the *Neoregelia* 'Gold Fever' seedlings, these may improve if grown to maturity, we shall wait and see.

A discussion was had about collecting seed and the following points were made:

- Put an organza bag over the inflorescence if you want to collect plumose seed, winged seed or pods on an inflorescence to be saved from animal attack.
- When a plant appears to have developed seed pods not all pods will contain seeds, many pods may be empty. This is often referred to as a false pregnancy.
- A self-fertile plant (accepts its own pollen) will have a high percentage of its pods containing seed.
- Non self-fertile plants which require a different clone (of same species) will have few pods containing seeds. This was demonstrated by a plant Ross had where only 6 of the 30 plus ovaries/pods were fertile and contained seed.
- Seeds from self-fertile plants are more likely to be true to type than seeds from non self-fertile plants.
- When collecting seed from your plants you need to be aware of where the pollen came from to fertilise the flowers, as it could come from other plants. The pollen that fertilised your plant could have been carried by the wind, bees, other insects etc., from a different species creating hybrid seed.
- A fertile seed pod will often change colour compared to a non-fertile seed pod. For example, some *Neoregelia* seed pods turn red when they are fertile, most become an enlarged plump white berry. Many *Aechmea* pods when ripe with seed turn black or blue making them easy to identify as being ripe.

Drew mentioned that one-litre twin chamber storage bottles can be bought new on the internet. These containers are a great way to measure various chemicals without any mess.

The small chamber is calibrated so that you can accurately measure out your chemicals. Drew now uses the twin chamber containers for all his liquid spray concentrates and liquid fertilizer concentrates. The twin chambers bottles are available online from an Adelaide based company: aborgreen.com.au



Ross showed different syringes which he uses to measure out his liquid concentrates. Use one syringe per chemical. Syringes are very accurate, they come in various sizes and are generally available from most stock feed supplies

Add a 3 or 4mm hose of desired length to the nozzle for pick-up from deep containers.

Smaller syringes (10 ml) are available at your chemist shop for around \$0.50.

Lastly, the Group discussed when to water plants. Here are some suggestions:

- Avoid watering in the middle of the day as you run the risk of burning the leaves from any beads of water that form on the leaves.
- Do not water Tillandsias late in the evenings as they photosynthesize at night and cannot do this if their leaves are wet. Allow enough time for the Tillandsia to dry out before nightfall, if watering in the afternoon.
- Bromeliads are fairly hardy plants and don't require as much water as many other plants.
- As a general rule water your plants 2 or 3 times a week during the summer, depending on how hot it is where you live.
- Water your plants once a week during the cooler winter months.
- Remember that if you have cut back your watering regime due to the drought and your plants are still doing well, continue with this practice.
- Check before watering, if the potting mix is damp and there is water in the well of the Bromeliad it most likely does not need to be watered.
- Check for quilling, these plants may require additional care to correct the problem. A little detergent in luke warm water poured into the vase of the plant, allow it to soak for a few minutes then gently tease the leaves apart, then flush it with fresh clean water. Repeat if necessary.



Neoregelia unknown ??
grown by Drew Maywald



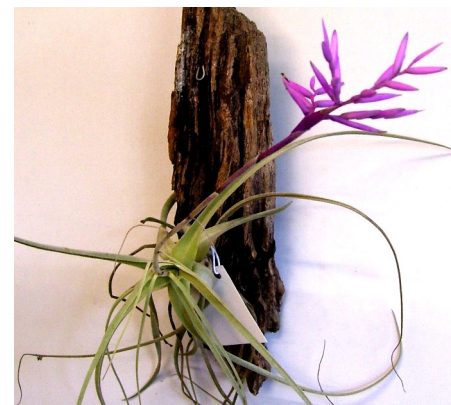
Neoregelia 'Blast'
grown by Dave Boudier



Tillandsia flabellata
shown by Dave Boudier



'Till Recipe'
by Keryn Simpson



Tillandsia straminea
grown by Keryn Simpson



xWallfussia 'Creation'
1st Open John Crawford



Tillandsia streptophylla
1st Tillandsioideae Gary McAteer



Tillandsia secunda
shown by
John Crawford



Neoregelia 'Sharkbite' unreg.
grown by Keryn Simpson



Neoregelia 'Salute'
grown by Coral McAteer



Tillandsia leiboldiana
Judges Choice
Drew Maywald



'Tills and Shells'
1st Decorative
Helen Clewett



Tillandsia 'Guatemalan Peach' grown by Helen Clewett

Tillandsia 'Guatemalan Peach' or ??? compiled by Ross Little

Plants imported into Australia for decades as *Tillandsia capitata* 'Peach' from various sources were using a common nursery name. In other words if the plant was a capitata and was a peachy colour it was called *Till. capitata* 'Peach'.

However, plants collected in Oaxaca State, Mexico in the 1980s and at that time being new, were named *Till. capitata* 'Peach' by Pamela Koide Hyatt. That clone is now registered as *Till.* 'Capitata Peach'. In the early 1990s another clone was collected by Dennis and Linda Cathcart in Guatemala. This plant has a short scape and velvety-soft, pliant leaves which recurve more than the Mexican type. This clone has been registered as *Till.* 'Guatemalan Peach'.

Tillandsia 'Guatemalan Peach' is similar to *Till.* 'Rio Hondo' which is similar in appearance but smaller than *Tillandsia rihondoensis*.

Tillandsia capitata is a mixed bag, Derek Butcher comments: My own view is that both 'Rio Hondo' and 'Guatemalan Peach' are within the variations you would expect under *Till. rihondoensis*. No doubt we will see these three names plus *Till. capitata* 'Peach' (not to be confused with *Till.* 'Capitata Peach' which comes from Mexico) in the trade but I leave it up to the grower. Remember that not all growers are interested in names and only those interested will take heed of the advice given.

Tillandsia rihondoensis Ehlers, sp. nov. Die Bromelie 2015 (2) comes from Guatemala, near the Rio Hondo in the province of Zacapa, and is known, so far, only from this locality.

Aechmea recurvata var. benrathii

by Drew Maywald

I have an *Aechmea recurvata* var. *benrathii* which is in a small wire basket surrounded with coconut fibre. The plant is currently in flower and looks quite stunning.

The leaves of the flowering plant have turned pink matching the bright pink of the inflorescence. Each flower lasts 3 or 4 days.

When not in flower the leaf bracts are quite green as can be seen on the pup in the photograph above. The leaves are quite thin being about 10mm wide at the base, while they are around 200 mm long, with small upward facing spines on the leaf edges about 15 to 20 mm apart.



Aechmea recurvata var. *benrathii* originates from the south east of Brazil in the Catarina district, this *Aechmea* is in the *Ortgiesia* sub genus of *Aechmea*.

Derek Butcher and Peter Franklin have written an interesting article titled "Ortgiesia – a Sub Genus of *Aechmea*" which gives more details on this species, including a list of plants that meet the criteria of the species. Derek and Peter identify plants in the *Ortgiesia* species of *Aechmeas*, as having "*Inflorescence compound or simple, lax or dense, typically nidular but usually scapose. Floral bracts not decurrent and not forming pouches; flowers sessile. Sepals connate for one third to one half their length, their mucros about as long as their free lobes; petals distinctly appendaged.*" Link: <http://fcbs.org/articles/Ortgiesia.htm>

This is a lovely mini *Aechmea* which is easy to grow here in S.E Queensland. I fertilise it about every 6 weeks with liquid Power Feed or worm tea from my worm farm. During the hot summer months, I water it every 2 or 3 days for a couple of minutes using the misting sprinkler system in my shade house.

Glossary:

Aechmea: A large popular genus to be found growing from Central Mexico to Argentina as an epiphyte, a terrestrial, or a saxicole. It was named by Ruiz and Pavon in 1794 after the Greek *aechmea*, spear tip, referring to the points on the perianth.

Appendage: An attached subsidiary or secondary part of a plant, as in petal appendages.

Benrathii: A variety of *Aechmea recurvata*.

Bract: A modified leaf, often a flower-like structure associated with the true flowers.

Calyx: The outermost whorl (sepals) of a flower. The collective name for the sepals of a flower.

Connate: United or joined; in particular, like or similar structures joined as one body or organ as in sepals fused into a cup or cone.

Decurrent: Running down the stem; extending down the stem or ovary below the point of insertion. A term used in botany to describe plant or fungal parts that extend downward.

Epiphyte: An air plant. A plant growing on another plant as a means of support only and deriving its moisture and nutrient needs from the air. It is not a parasite.

Inflorescence: All organs of a plant used for displaying flowers including the peduncle. Wrongly used as the part of the plant that holds or contains the flower or flower cluster, or the mode of flowering.

Lobe: Any part or segment of an plant organ; specifically a part of the petal, calyx or leaf that represents a division in the middle.

Mucros: A short sharp point at the end of a leaf.

Nidular: Nested; as if like or borne in a nidus or nest.

Ortgiesia: The word Ortgiesia was derived from the name of a Spanish botanist.

Peduncle: The name used for the stalk of the inflorescence. Wrongly used for the stem of a flower cluster.

Perianth: The floral envelope taken as a whole, consisting of the calyx (sepals) and corolla (petals).

Recurvata: With curved leaves.

Saxicole: A plant that lives naturally or prefers to live on or among rocks.

Scape: Refers to a leafless peduncle as in Amaryllidaceae. Better to use peduncle. It may bear bracts but no foliage leaves and may be one or many flowered. Wrongly said to be the stem of the inflorescence usually extending beyond the leaves.

Scapose: Bearing or resembling a scape.

Sepal: One of the separate parts of a calyx; the flower parts that surround or contain the petals. In bromeliads there are three sepals. *Sepals* typically function as protection for the flower in bud, and often as support for the petals when in bloom.

Sessile: Flowers attached directly at the base, not stalked. The flower rests directly on the stem.

Terrestrial Growing in the ground and supported by soil as opposed to growing in trees or water. A plant that is dependent on soil.

Var.: A plant having slight but distinct differences which distinguishes it from the type of the species; a botanical variety as opposed to a cultivar which is a horticultural variety.

Bromeliaceae – A Layman’s Guide - Part 4

Compiled by Drew Maywald 2019

The Hechtioideae Genera

Pronounced heck-ti-oi-de-ee, this sub family has only one genera, Hechtia. The genus is named for Julius Gottfried Conrad Hecht (1771–1837), German counsellor to the King of Prussia. Except for *Hechtia gayorum* the plants of this genus are dioecious – the male and female plants on different individual plants. Hechtia are native to Mexico, Central America and Texas. As of October 2019, there are 78 species in the genus.

Hechtia are heavily armed with marginal spines and require great care when handling. They are terrestrial and grow on desert hillsides and rocky slopes alongside cactus and are truly xerophytic, withstanding long periods of drought and extreme variations in temperature. Hechtia are not succulents, because they do not hold water in their tissue the way true succulents do, but they can be treated as such. Instead, they slow their growth when water is not available.

Hechtia tolerate colder temperatures better than other bromeliads. Hechtia can survive in both extremely hot temperatures and cold temperatures, below 0°C, for short periods of time. This genus actually prefers a strong temperature shift between night and day. Because these plants have grown accustomed to temperature swings because of their native desert homes, it is best if the temperature drops around 15 degrees from day to night.

Hechtia do not require humidity and, therefore, do not require misting. To keep them growing quickly and healthily, water them regularly during the spring and summer growing season. Allow the potting mix to dry a bit between watering, as too much water can cause rot. In the winter, hold back on the water. It is better for the plant to be too dry than too wet.

Hechtia love sunlight. They are tougher than other bromeliads which are usually burned by direct sunlight, because Hechtia have special scales on their leaves that reflect the sun to prevent burning. They can survive in up to 50% shade, but their unique, bright colours will not be as vivid and flowering may be reduced. They can be grown indoors, but it is often difficult to find an indoor space that provides enough bright sunlight.

Some of the Hechtia species can grow incredibly large. According to the Bromeliad Society of Houston, *Hechtia melanocarpacan* grows a rosette up to 1.5 mtrs across and produces a flower stalk that can reach 2.4 metres tall. There are other species, such as *Hechtia lyman-smithii* that are only 12 to 15 mm wide, but often form large tight clumps.

Hechtia will usually grow as large as the container they are planted in. When planted as a pup, these bromeliads grow quickly and should be re-potted every year until they reach maturity. It can take up to three years or more for a plant to reach maturity.

Hechtia can flower multiple times and continue growing and producing pups. They produce long flower stalks that grow out of the sides or centre of the plant. Most Hechtia flowers are not very showy. They are generally planted for their interesting foliage. As the plants grow and mature, the tips of the leaves may begin to turn brown. This is not a sign of damage, but a normal occurrence. You can trim away the brown segments or leave them in-tact.

Another unique fact about Hechtia flowers is that they can be identified as either male or female. Hechtia flowers are imperfect. They are always either male or female. This does not make much difference in the care or appearance of the flowers. However, if you want to propagate them from seed you must have one of each.

References:

- Butcher, Derek, "Bromeliaceae and its Eight Sub Families"
- Butcher, Derek and Gouda, Eric "The New Bromeliad Taxon List".
- Far North Coast Bromeliad Study Group NSW (FNCBSG NSW) Newsletter Index Glossary.
- Wikispecies.
- "A Bromeliad Glossary" second edition compiled by Pamela Koide, Bromeliad Society International 1998.
- Celeste Booth Bromeliades.info Plant Care.
- Melanie Dearing, Bromeliades.info Plant care.

Bromeliaceae – A Layman's Guide - Part 5

Compiled by Drew Maywald 2019

The Puyoideae Genera

Pronounced pu-yoi-dee-ee, this sub family contains one genus *Puya*. Puyoideae were part of the Pitcairnioideae sub Family. Pronounced pu-ya the name Puya was derived from the South American Mapuche Indian word meaning "point". These terrestrial plants are native to the Andes Mountains of South America and southern Central America. Many of the species are monocarpic, plants that flower, set seeds and then die. The species *Puya raimondii* is notable as the largest species of Bromeliad known, reaching 3 metres tall in vegetative growth with a flower spike 9 to 10 metres tall. The other species are also large with most of them having flower spikes 1 to 4 metres tall.

Some species of Puya in Chile, where it is locally known as chagual, are used to make salads from the base of its young leaves or stem. The species, *Puya chilensis* is one such plant. As of October 2019, there are 227 species within the Puya genus.

Puyas are hardy because of where they grow naturally. They are found in the high elevations of the Andes Mountains throughout South America. Only two species found in Costa Rica are not included in the South American range. In this region the climate is typically dry and temperatures can drop below freezing. Puyas must be hardy to thrive in such extreme climates. Puyas are terrestrial with their roots taking up nutrients and water from the soil.

Many Puyas have long, spiked leaves that form in a round, ball-like rosette, and some resemble yuccas, agave and other succulent plants, but they are not related to one another. Puyas adjust to arid conditions by suspending their growth while true succulents store water in their tissues. Puyas like plenty of sun and water during the summer growing season and require dry soil during cold temperatures.

An interesting fact about Puyas, is that some are protocarnivorous. This means that animals can become trapped and entangled in their spines and die. Then, as they decompose they provide nutrients for the plant through the soil. Many of the plants also have spines that act as protection from grazing animals.

Puyas grow very large, but slowly and often take years and even decades to produce a flower. Many species of Puya produce giant flower spikes that grow very tall and produce hundreds of flowers. They are monocarpic, meaning they produce only one flower spike and eventually die. Before they die they will produce many offsets and the plants usually grow in large colonies. One disadvantage of Puyas is their size. It may be difficult to find space within a garden or landscape to house a mature Puya. They have stiff leaves and sharp spines making them a bit more difficult to manage. In many cases Puya's unique form and attractive flowers make them worth the extra effort to include in a Bromeliad collection.

References:

- Butcher, Derek, "Bromeliaceae and its Eight Sub Families"
- Butcher, Derek and Gouda, Eric "The New Bromeliad Taxon List".
- Far North Coast Bromeliad Study Group NSW (FNCBSG NSW) Newsletter Index Glossary.
- Wikipedia, Puya.
- "A Bromeliad Glossary" second edition compiled by Pamela Koide, Bromeliad Society International 1998.
- Celeste Booth, "Puya: The Hardy Bromeliad", Bromeliad.info Plant Care.

Novice Popular Vote

- 1st
2nd NO NOVICE ENTRIES THIS MONTH
3rd

Open Popular Vote

- 1st John Crawford *xWallfussia* 'Creation'
2nd Keryn Simpson *Neoregelia* 'Sharkbite' unreg.
3rd Coral McAteer *Neoregelia* 'Salute'

Tillandsioideae

- 1st Gary McAteer *Tillandsia streptophylla*
2nd Helen Clewett *Tillandsia* 'Guatemalan Peach'
2nd Dave Boudier *Tillandsia flabellata*
3rd John Crawford *Tillandsia secunda*
3rd Drew Maywald *Tillandsia leiboldiana*

Decorative

- 1st Helen Clewett 'Tills and Shells'

Judges Choice

- 1st Drew Maywald *Tillandsia leiboldiana*

Web Links for Checking Correct Identification and Spelling ?

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

New Bromeliad Taxon List : <http://botu07.bio.uu.nl/bcg/taxonList.php>
Refer to this site for latest species name changes and correct spelling.

Bromeliads in Australia (BinA) <http://bromeliad.org.au/>
Refer to this site for its Photo Index, Club Newsletters, Detective Derek Articles.

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

Where do I Find the Dates ?

www.bromeliad.org.au 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.