

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

Edition: December 2023

Agenda: General Discussion



Venue: PineGrove Bromeliad Nursery
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Study Group meets the third Thursday of each month

Next meeting January 18th 2024 at 11 a.m.



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Meeting 16th November 2023

The meeting was opened at approximately 11.00 am
The 11 members and two visitors were welcomed.
Two apologies were received.

General Business

Our two visitors Len and Denise were introduced to the Group, Keryn had kindly been showing them around and where they could get some light refreshments. She also explained what is available to regular attending members such as our library and the Popular Vote Competition. We hope to see them both attend regularly in the new year.

Show, Tell and Ask!

Recently I was told Bromeliads are the cause of our mozzie problem. This led us to discuss mosquitoes in our Bromeliads *again* and how the wrigglers do not survive if a predator called a mesocyclops is living in the water wells feeding on the mosquito larvae.

To minimise the mosquito problem regularly maintain your yard and shade houses, don't leave water lying around or leave lots of decaying vegetative matter build up about that is likely to hold moisture and encourage mosquitoes and larvae, avoid leaving unused water holding vessels about will also help minimise the mosquito problem.

The following taken in part from FNCBSG NSW Newsletter January 2012:

Bromeliads and Mosquitos by Rob Smythe M.Sc.

A predator of mosquitos called Mesocyclops had been found by a Dr. Michael Brown working at the Queensland Institute of Medical Research.

What are Mesocyclops?

Mesocyclops are found in the bromeliads with clearer water. These have only recently been discovered as a mosquito predator by Dr. Michael Brown working at the Queensland Institute of Medical Research. They are very small and just visible to the naked eye. They zig and zag about often carrying two large egg sacks. Several researchers are using these creatures to study mosquito breeding in mine shafts and water tanks. These fellows keep my bromeliads free of mosquitos right through the year up until the heat and heavy rains of summer. They are now gone, dead or washed out of my bromeliads. They do not like putrid conditions and do best in clearer waters in cooler conditions, however they can be replaced after the heat of summer.

Where can I get the predators?

Up here in Townsville one looks for a pond that has no fish or tadpoles and as yet no wrigglers. It (the pond) is under predator control if it has not been sprayed. I brought the water home from two ponds and set up my own tubs in the yard. I have never had to top it up, but I do watch that my ponds do not get too hot or polluted. Midges have come to the ponds of their own accord and can be found in most neglected collections up here.

Are there any other predators?

Blood worms, these little creatures are small red aquatic worms which multiply via some weird divisionary process. They hatch into non-biting midges. These appear to be predators only in the sense that they can kill wrigglers, I have never seen them eat the wrigglers, though some midges can be carnivorous. While I was ill I set up glasses of possible predators around the bed, I had time to observe these creatures. Using wine glasses to simulate bromeliads, wrigglers came down to the bottom where the worms were concentrated. Anything touching the worm was wrapped in a ball of worm. These worms do not hunt. I found them in old neglected billbergias on the trees, they concentrate at the bottom of the vase, they are unusual creatures in that they can survive in putrid conditions. Their red colour is due to their possessing haemoglobin like ours. This concentrates the oxygen in their bodies, and is apparently very rare in insects.

Spirogyra: this is a filamentous algae found in ponds. When healthy, it collects bubbles and floats to the surface of the bromeliads and eventually becomes impenetrable to the wriggler, which subsequently drowns. Unfortunately, it can hook on to the spines and be carried out of the water. It then bleaches and looks ugly so you must be prepared to push it back into the water.

Bladder-worts: I have read about these as being mosquito traps in bromeliads (in habitat). The first one appeared in my *Neoregelia burle-marxii*. Maybe it was imported with the plant? When the plant was small, mosquitos appeared, I guess it was trapping and eating my Mesocyclops. Now the plant is larger mosquitos are not present. It may be useful, it's early days yet.

How do I treat my bromeliads to minimise mosquitos?

For the dry season and incidentally the cooler season, they are totally under predator control. I rarely find a single mosquito during this period. Spirogyra is best, Mesocyclops are very efficient but so small you do not know they have died until you find mosquitos.



L/H photo, mesocyclops consuming a mosquito larvae.

Do you recommend any particular spray treatment?

For the wet season I spray once a week. I have written of my aversion to insecticide sprays in the environment, the spray I use is my own formula, it does not contain harmful insecticides. I mix together 50m1 Alginox, 50m1 vinegar and 100ml of kerosene shaken to make an emulsion and made up to 5 litres with water. The kerosene is used only at swarming times. I walk around and spray the plants at dusk - 5 litres covers a thousand plants. If I have too much on the leaves of delicate plants I water these plants half an hour later, time enough for wrigglers to go beyond the point of no return on the health charts. This dilute emulsified kerosene, presumably because of the oil in water emulsion formed, does not appear to damage the plants like kerosene or kerosene based sprays do. Do not be tempted to try commercial white oil. Kerosene has a low boiling point and hence higher vapour pressure and does not hang around like the damaging white oil.

If I add kerosene to the spray, how long should I leave it on delicate plants?

If you have delicate plants with soft new leaf, wash off 15 minutes after spraying. My studies have shown that large wrigglers die quickly but minute ones can survive 15 minutes under the spray in well-oxygenated water. Probably something to do with thinner skin and larger surface area to body weight of the smaller wrigglers.

How does the spray work?

The kerosene stays only long enough to smother the wrigglers. The Alginox is surfactant, which would lyse and destroy eggs. It would also change the surface tension of the water which might cause landing mosquitos to get wet and sink, and also make it impossible for hatching mosquitos to escape from the surface. The vinegar changes the pH of the vase water killing the larvae.

What is the easiest way to check for mosquitos?

Tip the water into a white bucket is the surest method, a white bucket will show the smallest wriggler. Should this method be impossible or even impracticable then try the battery acid tester to sample the water. Check for surfacing wrigglers looking for air after the spray treatment. Use a torch at night. All these methods will work for you.

When/where am I most likely to find mosquitos in my bromeliads?

Flowering neoregelias, these have rotting flowers in the vase supplying food for the predators as well as the mosquitos, and they release carbon dioxide as the old flower ferments. Mosquitos are attracted to water, flesh tones, heat, and carbon dioxide. Flowered neoregelias score 3 out of 4. Shaded plants also attract mosquitos. Very rarely do I see a mosquito hatching of any size - the worst of-fenders in my collection are neoregelias, frequently offending, but not big

hatchings unless their water is putrid. Screwing out the spent flower removes the food source and also cleans up the plant's vase.

What else can I do?

When you are sitting in your garden amongst your broms having a coffee and a cigarette just drop your coffee swill and your butts into the broms. The caffeine and nicotine will kill just about everything in the animal kingdom including your pet dog!

Before signing off I should point out I will probably change the recommended amounts in sprays in the future as experiments need a lot of time and patience. I wish to get the Alginox as low as possible as it could harm frogs and it wipes out the desirable algae and spirogyra. The spray does not seem to worry the midges and I do not yet know what it does to the Mesocyclops.

The predator method and the spray method cannot be carried out concurrently. The spray kills the algae spirogyra.

In conclusion, if you use insecticide, observe closely as in some areas of the world there are mosquitos now immune to all known insecticides. It is happening here to a degree. If I am right, the next step would be to develop chemical resistant organisms and then use integrated pest management.



Keryn sent in a photo of a plant growing in her garden with no tag. At first glance the pale rose-pink floral bracts led me to think it was *Tillandsia deppeana*.

Further discussion with Keryn reveals, yes the bracts are pink but the flower petals are yellow.

Till. deppeana has blue petals so clearly not that species.

As for a name we suggest to Keryn to do a search on the Bromeliad Cultivar Register (BCR) by entering deppeana into the search box as a starting point.

Ask the seller for more information.

If anybody recognises Keryn's plant please let us know.

For **Show, Tell and Ask!** Keryn brought along a post floral (dead) inflorescence and asked if we recognised it. She also showed a photo of the plant making an identification much easier.

The following is a response I gave recently for the same plant as Keryn's query that we identified as an unregistered Alan Ladd hybrid.



As *Vriesea* 'Ladd's' Elation' unreg.

Alan sold seedlings maybe around 2009/10 ish as *Vriesea elata* now *Cipuroopsis elata*. When these grew it was obvious they weren't true to type. Alan disagreed until they flowered, clearly foreign pollen was involved, exactly who we're not 100% sure. Thoughts by Alan at the time were *Vriesea zamorensis* now *Cipuroopsis zamorensis* or *Vriesea dubia* now *Cipuroopsis dubia*, not forgetting he thought he pollinated his *Vriesea elata* with its own pollen so he really had no idea of who the foreign pollen donor was.

Where did the foliage colour/patterning come from, maybe *Vriesea ospinae* var. *gruberi* now *Goudaea ospinae* var. *gruberi* was involved which has always been my thoughts. I named the plant *Vriesea* 'Ladd's Elation' because we were all originally elated that Alan got seed off his *Vr. elata*, so I thought it was a fitting name to remind us of the plants history.

Also look toward *Vriesea* 'Gold Finger' and *Vriesea* 'Elan' for more clues.

I guess it would now be a xCipurogoudaea or xCipugoudaea, Geoff can work that one out one day.

Photos by Keryn Simpson - inflorescence and Ross Little - plant.



Tillandsia juncea grown by Gary McAteer



'Compilation of Tills'
by Keryn Simpson



Tillandsia stricta
grown by Helen Clewett



Vriesea 'Forest'
1st Open Keryn Simpson



Lutheria 'Galaxy'
1st Judges Choice Helen Clewett



Neoregelia 'Dorothy's Jewel' unreg.
and

Tillandsia caput-medusa
grown by Kayelene Guthrie



x*Vrieslandsia* 'Marichelle'
1st Tillandsioideae Keryn Simpson



Aechmea 'Buckwheat'
grown by Michelle Hartwell



'Have a Brom Christmas' 1st Decorative Coral McAteer

WACKY WORDS - 2

THE SWANKY NAIL

1 Get it	2 K C I T S	3  Time	4 CHEESE
5 Heart	6 \$ Attention	7 Shhhhhh NIGHT	8 L Y U C K
9 Tit IN led	10 	11 All world	12 C ake
13 Fly Night	14 Play Play Play	15 Bad IN Mood	16  coffee
17  House	18 G F O N I L	19 CHINA bull SHOP	20 Good Good Be Be TRUE
21 Dance ²	22 	23 Justice all all all all	24 

Aechmea marauensis

Type: Elton M.C. Leme no.815,
Roberto Menescal & Renato
Bello (holotype HB, isotype RB).

Grows terrestrial or epiphytic
near Maraú in the State of
Bahia, Brazil, January 23, 1986.



The 140mm long deep pink bracts are a stand-out in the garden amongst the surrounding green vegetation.

Aechmea marauensis grows to 1.300m high in flower by 1.00m across here in our garden under a Coolamon (*Syzygium moorei*) tree that affords it some shade during the heat of the day. It receives morning and afternoon sun and water when it rains. Considering the lack of attention it gets it still flowers well and gives a couple of offsets each year. It would obviously benefit, or at least we would if it was given regular watering and fertilizing other than the fruits of the Coolamon tree that drop into the plant and break down as natural fertilizer.

After lunch Helen gave a brief discussion about Decorative arrangements, mostly about size and the use of embellishments. She showed how the use of a place mat as an embellishment can lift a display from plain and simple to having a more formal look.



What is an embellishment?

It is a decorative detail or feature added into your design to make it more attractive. An embellishment can be anything that strikes your fancy that is not plant material e.g. fancy pot, ornamental animals, figurines, rocks, gravel, fancy barks, driftwood pieces, sea shells, ribbons to name a few.

An embellishment should be a pleasing contrast and in proportion between plant or plant material and container, however Bromeliads must be the main emphasis of your design.

A pleasing decorative piece predominantly made up of Bromeliad inflorescences or colourful plants can beautifully compliment any dinner table, coffee table or outdoor dining area.

Put your skills to work for you Christmas table and consider the 'Rules of 3' that Helen was asked about and discussed.

Floral Arranging - Rule of 3

Having 3 different types of greens will give your arrangement a depth of colour and a variety of texture. In Floral Design, even numbers do not create a balanced look. Odd numbers, like 3, help create a balanced distribution of greens/flowers.

The Rule of Three is a design concept that's so easy to use you almost can't go wrong! Simply line up three of the same plants, in the same pot, to create a visually pleasing series. For example, a series of identical pots lined up on a stone wall creates a simple (yet satisfying!) repetition.

Floral Art School of Australia and International Floral Design School Basic Rules of Flower Arranging: there are a few basic rules in flower arranging that should be observed. Once you understand these you can create so many different styles and your floral designs will have that professional look.

The basic rules of flower arranging include:

Proportion Balance Harmony Rhythm Colour Texture

Proportion:

The size of the flowers, foliage and container should all be in proportion to each other. For example, a tall arrangement of Aechmea or Portea spikes would be out of proportion arranged in a small vase. It would not only look top-heavy, it would be in danger of toppling over. At the opposite end of the scale short-stemmed flowers should not be placed in a large urn.

An arrangement should also be in proportion to the surroundings. A small posy suitable for a coffee table would be lost in a large reception room. Churches and hotel foyers need large arrangements in keeping with their larger than usual surroundings.

Balance:

When correct balance is achieved, an arrangement looks “right.” If it is not balanced it is like seeing a picture hanging crookedly, you feel uneasy and you immediately want to straighten it.

The height of the arrangement should be at least one and a half times the height of the container. For example if a container is 25cm tall then the height of the arrangement should be at least 37cm high. An arrangement can be much higher than this, but for correct balance it should not be lower.

Harmony:

The materials such as flowers, foliage, colour, container and any accessories used in an arrangement should all look as if they belong together.

Rhythm:

With a flower arrangement the eye should be initially attracted to the overall design and then move from flower to flower. It should flow so it appears natural and not be stiff.

Flower heads should be on different levels. Flowers all placed on the one level will look dull and uninteresting. Aim for a three-dimensional look in your designs. This enables the eye to travel from the largest feature flowers in the centre, through to the medium sized flowers, and then to the smallest flowers or buds that are placed around the edges.

Colour:

The choice of colour should be chosen to suit the occasion and surroundings.

Certain colours complement each other:

Yellow is the colour of the sun and is bright and cheerful.

Blue and green are cool and soothing.

Pink is feminine and uplifting.

Orange and gold are warm and mellow.

Red is associated with love and is vibrant and exciting.

Purple is a symbol of royalty and is rich and dramatic.

Texture:

Flowers and foliage differ in texture. You should use different textures that go well together to give variety to your designs.

Christmas Quiz - 2023

1. What did the other reindeer not let Rudolph do because of his shiny red nose?
2. How many ghosts show up in ‘A Christmas Carol’
3. Where was baby Jesus born?
4. The movie ‘Miracle on 34th Street’ is based on a real life department store. What is it?
5. What are the two other most popular names for Santa Claus?
6. Elvis wasn't going to have a white Christmas he's going to have a?
7. What do people traditionally put on top of a Christmas tree?
8. In the movie ‘Home Alone’, where are the McCallisters going on vacation when they leave Kevin behind?
9. In which modern-day country was St. Nicholas born in?
10. In the movie ‘It's A Wonderful Life’, what happened every time a bell rang?

Wacky Words - 2 Answers

1. Get Over It. 2. Stick Up. 3. Time After Time. 4. Big Cheese. 5. Broken Heart. 6. Pay Attention. 7. Silent Night. 8. Lucky You. 9. Entitled. 10. Firefly. 11. It's a Small World After All. 12. Piece of Cake. 13. Fly by Night. 14. Triple Play. 15. In a Bad Mood. 16. Morning Coffee. 17. Lighthouse. 18. Fooling Around. 19. Bull in a China Shop. 20. Too Good to be True. 21. Square Dance. 22. Mailbox. 23. Justice for All. 24. Beeline.
10. An angel got hit his wings.
9. Turkey (originally Patara, a city in the ancient district of Lycia, in Asia Minor).
5. Kris Kringle and Saint Nick. 6. Blue Christmas. 7. An angel. 8. Paris.
1. Join in any reindeer games. 2. Four. 3. In Bethlehem. 4. Macy's.

Christmas Quiz Answers

Open Popular Vote

- 1st Keryn Simpson
- 2nd Helen Clewett
- 3rd Michelle Hartwell

Vriesea 'Forest'
Lutheria 'Galaxy'
Aechmea 'Buckwheat'



Happy

Tillandsioideae

- 1st Keryn Simpson
- 2nd Helen Clewett
- 2nd Gary McAteer

xVrieslandsia 'Marichelle'
Tillandsia stricta
Tillandsia juncea

New

Decorative

- 1st Coral McAteer

'Have a Brom Christmas'

Judges Choice

- 1st Helen Clewett

Lutheria 'Galaxy'

Year!

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.

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

New Bromeliad Taxon List : <https://bromeliad.nl/taxonlist/>
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.