ILLAWARRA BROMELIAD SOCIETY INCORPORATED

NEWSLINK

January 2020

Tillandsia crocata – yellow-flowered small clone clump, grown by Lynette Nash.

***Tillandsia* 'Rutschmann's Orange'**
Clump and flower detail - Photos by Graeme Barclay
(Lynette Nash's beautiful *T. crocata* photo by Peter Coyle)
Reprinted from *Bromeliad*, Journal of the Bromeliad Society of New Zealand Inc.

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MEETINGS - The Society meets at 12.00 noon on the first Saturday of each month (except January and December) in the Laurel Room* at the Ribbonwood Centre, DAPTO. *Scribbly Gum room for November meetings only.
MEMBERSHIP SUBSCRIPTIONS - Due 30th June each year: $15 single/$25 family.
NEWSLINK ISSUED QUARTERLY - January, April, July, and October and at http://www.bromeliad.org.au

VISITORS ARE ALWAYS WELCOME

NEW MEMBERS: A very warm welcome to our new members Ron Hurry and Faye Lloyd who joined our Society in October. We wish you a long and happy association with us!

COMPETITION RESULTS:

- **POINTS SCORE WINNERS:** Hearty congratulations to our Points Score winners for 2019:

  Open - Ann Kennon
  Novice - Glenn Martin
  Tillandsia - Ann Kennon

But thanks go to all of our members who participate in our monthly competitions as seeing all of these beautiful plants on display is, for many of us, one of the highlights of our meetings.

- **GROWING CHALLENGE:** In February 2018 we challenged participating members to on-grow a bromeliad seedling to the best of their ability and in 2019, the second year of competition, Pam Townsend was again judged the clear winner for the second year in a row! Congratulations Pam! The seedlings distributed at the beginning of the year were of an unknown neoregelia X—one from Neville's collection with the seed parent being *N. concentrica* with Mother Nature assist.

  We have to thank Michael Drury for supplying these seedlings over the past two years but, unfortunately, as he doesn't have enough seedlings of any one kind to let us have this year the competition won't be held in 2020.

- **PHOTOGRAPHIC COMPETITION:** We recognise that there are many plants that cannot be entered in the monthly competitions because they are too big, or growing in the ground or in flower at the wrong time, so in 2018 we ran a competition for photographs of these plants to be judged by the members at our November meeting.

  As we wanted to honour our dear member, Meri Stefanidakis, in some way, the Photographic Competition seemed the ideal choice as Meri had such a flair for photography and art work and so her friends, Beth and Jim Clague and Monica De Clouett, proposed and donated this trophy in her memory. For 2019 The Meri Stefanidakis Memorial Trophy was won by Noel Kennon with a photograph of his *Tillandsia* 'Devine' and Judy Hunt and Suzanne Burrows coming in in a tight tie for second place.

MONTHLY RAFFLE PRIZE ROSTER: After discussion with a few committee members we have decided to leave the number of items each rostered member brings as has been in the past—i.e., up to five bromeliad plants or goods concerned with the cultivation of bromeliads for the raffle. The quality of plants should comply with the requirements of 'Plants for Sale' and should you be unable to provide items for the raffle on your rostered day it is essential that you contact the Program Officer (Bob Stephens, Mob. 04 1283 4985) so that appropriate re-arrangements can be made.

February - Christine Stephens, Yvonne Perinotti, June Casey, Elizabeth Bevan
March - Jim Clague, Sandra Carnie, Beverley Irvine, June Smith
April - Eunice Spark, Betty Ellis, Jan Stammers, Rhonda Patterson
May - Sandra Southwell, Rose Di Noro, Ann Kennon, Maureen Wheeler
June - Monica De Clouett, Anne-Marie Brun, Edwina Wain, Pam Townsend
July - Barbara Jones-Beverstock, Deniece Crutchley, Brian Smith, Maadi McKenna
August - Bob Stephens, Michael Drury, Freda Kennedy, John Toolan
September - Rhonda Grant, Steve Wain, Carol Burgdorf, Anne Mobbs
October - Fran Parrott, Judy Hunt, Eileen Killingley, Graham Bevan
November - Neville Wood, John Boyd, Val Miller, Suzanne Burrows

<u>2021</u>

February - Noel Kennon, June Casey, Beth Clague, John Toolan

ROSTER FOR CLEANING UP AFTER THE MEETING:

February	-	Glenrae Barker, Anne-Marie Brun, Isabella Chambers
March	-	Gary and Colleen Claydon, Rose Di Noro, Stephen Dolbel
April	-	Freda Kennedy, Ann and Noel Kennon, Maadi McKenna
May	-	Rhonda Patterson, Gloria Purdon, Brian Smith
June	-	June Smith, Sandra Southwell, Eunice Spark
July	-	Maureen Wheeler, John Boyd, Ron Hurry and Faye Lloyd
August	-	Steve and Edwina Wain, Cheryl Mathews
September	-	Ana Mallon, Morgana Harris, Amber Pascoe
October	-	Julie Stringer, Pam Townsend, Jan Thoroughgood
November	-	Elizabeth Bevan, Christine Stephens, Jan Stammers

GENERAL MEETING – FEBRUARY 1: Edwina will give a presentation on the 2019 Bromeliad Conference held at Sea World on the Gold Coast in October, 2019.

GARDEN VISITS #1 - SATURDAY, FEBRUARY 22: With the extreme weather conditions we are fortunate to have three gardens available to visit for this our first garden visit of the year. We will start at 10 am at Ann and Noel Kennon's home at 7 Whitely Place, KANAHOOKA where we will have morning tea (Phone: 4262 7614). At approximately 11.15 am we will move on to the home of Glenrae Barker at 8 Sunray Crescent, HORSLEY (Phone: 4262 1249). To reach Glenrae's travel down Kanahooka Road and turn left on the Princes Highway, heading into Dapto. In the middle of town turn right into Bong Bong Road, cross over the railway line, then take the first left into Sierra Drive and then the first right into Sunray Crescent (No. 8 on the right hand side). At approximately 12.30 pm we will then proceed to the home of Sharyn and Italo Baraldi at 25 Antrim Avenue, WARILLA (Phone: 4296 2166) for lunch (BYO). Tea and coffee will be provided for morning tea and lunch but please bring cake or slice to share. For any further information please contact Bob Stephens on Mob. 04 1283 4985.

GENERAL MEETING – MARCH 7: Michael's topic for our March meeting is on bigeneric bromeliads and he has put out the request that we look to see if we might have any bigenerics in our collections which we can bring to the meeting and even better if you might also have examples of the parents (or just the names of the parents if you know them). They do not need to be show quality plants, particularly with the recent heat and water restrictions. It will be a dry talk without some physical plants to see and admire and I would like to set these up on a table so that members can see the actual plants. x*Sincoregelia* 'Galactic Warrior' is an example of a bigeneric. It will be good to see the genetic variations in these plants. An electronic copy of the talk and articles referenced will be added to the electronic library.

MARCH 14-15 SALES DAYS AT WARILLA: It has been decided that we will again hold our sales day over two days—Saturday, 14th and Sunday, 15th March—with setup commencing at 8.00 am on the Saturday and opening to the public from 9.00 am – 3.00 pm on the Saturday and 10.00 – 2.00 pm on the Sunday. It would be helpful if members could advise by the February General Meeting if they require a table. The venue is the same as the last couple of years—the Warilla Neighbourhood Centre—next to the Swimming Pool on Benaud Crescent, but with entry from Lake Entrance Road.

GENERAL MEETING – APRIL 4: "BROMELIADS OR MINERALS" - A presentation by Noel Kennon.

WORKSHOP #1 – SATURDAY, APRIL 18: Our first workshop for the year will be held at Rita and John Toolan's home at 5 Rondanella Drive, Kanahooka (Phone: 4261 1773) with a 10 am start with morning tea and finish around 2 pm. John and Rita will provide tea and coffee, and prepare a sausage sizzle for lunch. Please bring salads, cakes or slices to share. This workshop will be run by Graham Bevan, with the topic to be determined after consultation with our members at the February and March meetings.

LUCKY DRAW PRIZE: Noel initiated the Lucky Draw prize late in 2017 and since then many members have taken home some great plants as prizes. This activity will continue for as long as members donate the prizes and if you would like to contribute, if only for one month, please contact Bob Stephens.

October 5, 2019: Competition Plant Results

Open:

1st	Rhonda Patterson	*Quesnelia liboniana*
2nd	Steve Wain	*Aechmea capixabae*
3rd	Ann Kennon	*Goudaea ospinae*
3rd	Ann Kennon	*Canistropsis seidelii* X *C. billbergioides* 'Plum'

Novice:

1st	Belinda Drury	*Cryptanthus bahianus*
2n	Judy Hunt	*Aechmea recurvata* var. *benrathii*

Tillandsioideae

1st	Ann Kennon	*Tillandsia floribunda*
2nd	Michael Drury	*Tillandsia fasciculata* (Mexico)
3rd	Suzanne Burrows	*Tillandsia stricta* 'Houston'

November 2, 2019: Plant Results

Open:

1st	Rhonda Patterson	*Aechmea nudicaulis*
2nd	Steve Wain	*Vriesea simplex*
2nd	John Toolan	*Vriesea hieroglyphica*
3rd	Jan Stammers	*Neoregelia* 'Predator'

Novice:

1st	Ana Mallon	*Neoregelia* 'Raspberry Ripple'
2nd	Judy Hunt	*Neoregelia* 'Tiger'

Tillandsia:

1st	Steve Wain	*Tillandsia cacticola*

NOTES ON PLANTS SEEN AT OUR EARLIER MEETINGS:

Ann Kennon has recently brought in some beautiful darker coloured variations of the more usual yellow-coloured *Tillandsia crocata*, including *T.* 'Copper Penny' and so I was very interested to find this article by Graeme Barclay—and hope that you might find it so too!

***Tillandsia* 'Rutschmann's Orange'**

By Graeme Barclay – 'Special Species Spotlight' appearing in Bromeliad Society of New Zealand Journal (See cover pictures).

Sometimes luck, timing and fate play a role in discovering new species or special clones that end up in our collections. This normally involved a keen eye when exploring in or near wild habitats, where experts in certain genera or species groups are able to identify a new or different plant from the smallest of details. Our subject is a good example of this. To look at the plant when it is not blooming, one sees a normal (albeit larger) form of the commonly cultivated *Tillandsia crocata*. Normally, *Tillandsia crocata* flowers have canary-yellow petals.

However, when Dr. J. Rutschmann from Switzerland noticed a bright orange-flowered plant that looked like *T. crocata* blooming in the grounds of a hotel in Brazil in 1983, he took a piece back to Europe, and that was how this particular clone entered cultivation and subsequently spread around the world. There has been some doubt over the years as to whether this plant was a true species, or actually a hybrid. In his 2008 article archived in the BCR, Derek Butcher from Adelaide, Australia relates the interesting background as follows:

"*…When Werner Rauh described T. crocata var. tristis in 1983, he mentioned how variable T. crocata was. At that time T. crocata was considered to be widespread in Brazil, through Argentina to Bolivia. He referred to a very large form collected by Dr. J. Rutschmann of Basel, Switzerland in the grounds of a hotel in Brazil, and which had a 6-7 flowered inflorescence and fragrant, dark orange flowers.*

A year later, Walter Till created T. caliginosa in 1984 and treated T. crocata var. tristis as a synonym, T. caliginosa coming from Northern Argentina and Southern Bolivia. The orange-flowered T. crocata continued to offset and be grown by European specialists. In fact in 1996 it made its way to Australia as T. crocata 'Orange' where it would not offset fast enough to satisfy the demand. In dry Adelaide, 'normal' T. crocata has leaves 7 cm long but leaves for 'Orange' are 13 cm long.

Nobody has succeeded in growing self-set seed from this plant to prove it is a form of T. crocata and not a hybrid. However, it was collected in Brazil far from the habitat of T. caliginosa so this cannot be considered to be a parent and we are talking about a putative natural hybrid. Because of another man-made hybrid—see below—this clone needs a more specific name, like T. 'Rutschmann's Orange'.

In 2004 Doetterer in Germany was selling T. caliginosa, having obtained his stock from Holm. What is interesting is that a low proportion of these plants do not have the typical glabrous leaf sheath of T. caliginosa nor the typical dark brown petals. In fact,, they have T. crocata type leaf sheaths and almost orange petals. It would appear that some foreign pollen has crept into the seed-raising project. Because of their hybrid origin they should be called T. 'Mock Orange'. The problem with identification will be the fact that T. caliginosa also has long leaves which remind me of a live floppy mouse tail compared to a dead stiff mouse tail of T. myosura. We must remember here that T. myosura was a 'confused' species for over 50 years until Walter Till created T. caliginosa in 1984.

So if you do have a T. caliginosa acting oddly, think of 'Mock Orange' …"

Some interesting facts, especially for those of you that may be growing an orange-flowered Tillandsia caliginosa.

Fast forward to later years, where Peter Tristram in NSW (from whom I got the plants photographed here) reports that *Tillandsia* 'Rutschmann's Orange' does indeed self-set seed and the seedlings all grow and bloom much the same. This confirms it is probably a true clone of *T. crocata*. If it had another species as a parent, being a hybrid you could expect some variation with this other parent's features showing up, even though it would likely be a primary hybrid (species x species) where all offspring can look similar. It's possible this plant is the result of a natural crossing of two different clones of *T. crocata*, that perhaps produced the larger size and orange petals, but, of course, we will never know for certain without a DNA study of the genetics. For what it's worth, I have dissected a live flower head off my *T.* 'Rutschmann's Orange' clump and compared the floral parts to the botanical description *T. crocata*, getting a very close match. So for the purposes of this article, we will treat it as a valid clone of species *T. crocata*, as per the description in the BCR.

I have just 'selfed' all the flowers on the colony of four plants shown here, swapping pollen from one plant to another to hopefully make self-set seed. If successful we can make seedlings of this unique clone readily available. As mentioned earlier, the perfume of the orange-petalled blooms is very strong. Someone once commented: '*they smell like a florist shop*.' They are right. If you own and bloom other *T. crocata* clones, you will no doubt agree!

Tillandsia 'Rutschmann's Orange' is relatively fast growing and enjoys very bright light with regular watering and foliar feeding. If well fed, it will branch with pups after blooming to form a clump and is grown best mounted on driftwood or glued to a firm mount like most other tillandsias. However, it will also grow just as happily unmounted and unrooted, as seen in my clump photographed here, where they are just sitting on the rim of a clay pot. It is reasonably hardy and should be able to be grown outdoors here if desired in a sunny but drying area (e.g., under the eaves of a house), without too many issues.

PLANT LABELS

(Notes from a talk given by Drew Maywald at a meeting of the Far North Coast Bromeliad Study Group NSW which appeared in their newsletter of December 2019)

When I started collecting bromeliads in December 2017 I bought some plastic name tags and expensive permanent markers to write the plant names on the tags. Unfortunately, the 'Permanent Markers' proved to be temporary as after only 2 years many of my tags had faded so badly I could no longer read the plant names. Luckily I take a photo of every bromeliad when I acquire it and put it in my Bromeliad Register so I was able to identify all my plants. Like all bromeliad enthusiasts I wanted to find an inexpensive way to make my plant names more permanent.

I used a 4B pencil which gave me a good clear name and then looked to see if I could coat the tag with a clear lacquer to protect the name ever further. I bought some *Rust-Oleum 2X Ultra Cover Clear* lacquer in a spray can from the paint section of Bunnings and sprayed each named tag and then allowed them to dry. The result was a clear film which protected the name and could not be wiped off with a cloth.

I chose the *Rust-Oleum 2X* lacquer because, while it is not the cheapest product available at around $12 a can, it is the best to use for outdoor applications. I also found that spraying each tag twice increased the thickness of the lacquer. You can buy the lacquer in a gloss or satin finish. I chose the gloss finish simply because I could easily tell which plants I had relabelled and sprayed with lacquer. The lacquer takes around 15 minutes to dry but I left mine for at least 2 hours to ensure that the lacquer had dried completely before putting it in the plant pot. The lacquer reaches maximum adhesion and durability in five to seven days, after which time it is very difficult to remove the name even with orange oil.

Having solved my durable plant tags problem I then looked for the best way to clean my old tags to that I could re-use them, rather than buy a whole lot of new ones. John Crawford suggested that I use orange oil [*Planet Ark Orange Power Sticky Spot & Goo Dissolver*] which is available at major supermarkets (around $7 for 110 ml). This product removed all the dirt and old writing, whether in pencil, permanent marker or pen, quickly and easily restoring the tag to a pristine condition. I simply put some orange oil on a cloth and rubbed it over the tags and then wiped each tag with a dry cloth to wipe off any excess oil. For really dirty tags I applied a couple of drops direct onto the tag with great results so I tried it on some tags that were more than 6 years old with the same amazing success.

So far I have done more than 500 plant tags and I am now doing the same with tags for vegetable seeds and herbs. When I plant seeds I now write the name of the plant on a tag in 4B pencil or a felt pen, spray it with *Rust-Oleum* and write the date when I planted the seeds on the back of the tag, which can be cleaned off with *Orange Power* later if need be.

CONGRATULATIONS TO OUR NEW LIFE MEMBERS – ANN AND NOEL KENNON

I think that it came as quite a surprise to Ann and Noel when, along with the other trophies and awards that they were accepting at our Christmas party they were asked to step up to receive their Life Membership pins which we felt were so richly deserved.

Ann, as Secretary, made it so easy for other members of the committee and both Ann and Noel have been so very generous in opening up their garden for both visits and committee meetings. I'm sure that at times it must have been a headache for Noel to organise the monthly topics, workshops and garden visits—bus trips too—and he has introduced many new features to our program including the Lucky Draw prize, Lucky Dips at our Show (where often they supplied the bulk of the plants), and the Photographic Competition. Quite early on in his membership Noel took on the huge—and much needed--task of updating our Constitution and By-Laws and over the years he and Ann have worn many hats, including heading up plant sales, etc. Congratulations—and many thanks—to you both!

BROMELIAD ROOT ROT AND HEART ROT

By David Skimmings (Reprinted from The Hunter District Bromeliad Society Inc. newsletter of April 2011)

As a follow up from various discussions at last month's meeting I thought I would cover more on why sometimes our broms seem to rot off in the pot. If this happens rarely to you it comes as a bit of a shock when it does. As outlined by some members this occurs from over-watering and/or the potting mixture not being free draining enough. Some members have reported this has been an issue over the past 12 months. This is because the rainfall and humidity has changed dramatically in some areas. Remember we have just come out of a 7-10 year drought or, at least in the urban environment, much drier times.

As stated, the potting mix must be free-draining, so the plant dries out a little around the base—i.e., not having what amounts to a wet sponge wrapped around your plant 100% of the time.

I was given a nidularium in a pot by a friend and I didn't do anything with it other than put it on the shelf with the others. In hindsight I should have re-potted it with my own mixture. After a few months it went brown in the centre well before its time. [A photograph in the original article shows that] after a bit of play with the plant the centre cone just popped out. Oops! I knew what it was straight away—the dreaded rot as I had seen this in succulents. On inspection I noticed it had been potted in a normal sandy potting mixture that held too much water and it had also been potted too deeply in the mix--i.e., the soil was too far up the side of the plant. This mixture didn't have enough bark chip, etc. in it and it also had some manure in it causing it to be "muddy".

We have basically identified why this rotting occurs so we'll just touch on the horticultural science behind the cause. It is an organism called *Phytophthera cinnamomi. Phytophthora* causes the serious potato disease known as late blight or potato blight. Late blight was a major culprit in the 1840s European, the 1845 Irish and 1846 Highland potato famines. This organism is a fungus with swimming spores which thrive in oxygen-deficient conditions and the spores have a long time resting stage, estimated at 12-15 years. Without deviating too far from broms, there had been massive plant losses in tomatoes, avocado plantations, durian, oak and cacao trees, cinnamon tree plantations (Java) and crown rot in pineapples (Nundah). Two indicators are (hopefully if not too late) the foul smell and blue/black colouration around the leaf attachment.

Sometimes all is not lost and you can dry the plant out, strip off the mushy leaf tissue till you get back to good ones then sit the plant in a pot by itself or hang it up. Occasionally you'll save the plant, or at least score a pup before the "mother" is deceased. If your plant is much loved, expensive, or rare the additional application of fungicide may be something you want to try. The recommended fungicide for the pineapple industry is *Ridomil* (*Fongarid*); however, there are plenty on the market that I won't list in this article.

A further note on the above problem comes from Jeanette Robertson of the Caboolture & Districts Bromeliad Society Inc., and I have reprinted it from their newsletter *KABBROM*, March/April 2009.

Over the past couple of months I've noticed a problem with some neoregelias in my collection where some leaves, part-way up the plant—i.e., not at the base and not in the crown, were rotting. Not having experienced this before I took a plant to a Society meeting where it was identified as the fungal disease, ***Phytophthora***. Apparently the disease is present in soils and potting mixes, is water borne and spreads rapidly. Plants are particularly susceptible if leaves have been damaged and this occurs mainly during warm, wet periods where the water in the cup overheats and damages the leaves.

The treatment is to isolate your plant from your collection as the disease is spread by water. Tip out all the water and remove any damaged leaves, then drench or spray with a fungicide. ***Copper*** is a main ingredient of many fungicides and ***copper kills bromeliads***, so care needs to be taken with the fungicide used. I've used ***Mancozeb***, while ***Fongarid*** is another copper-free fungicide that could be used.

A positive sign that I've noticed is that some of the affected plants are 'pupping' so it seems that all is not lost.

YOU CAN'T KILL A BROMELIAD!

By Anne McBurnie (Reprinted from *Bromeliaceae*, November/December 2004 Vol. XXXVIII(6))

Can't you? Well we did! We killed about $800 worth … and we felt very despondent, frustrated and lost. We felt lost because we didn't know why.

This all happened after we had been members of the bromeliad club for one year. We had just come back from an organized club bus trip to Coffs Harbour and Ballina where we saw and bought some lovely bromeliads. We were very excited about our new acquisitions.

Since I was on holidays I thought it would be a good time to repot all of our bromeliads. This was my first time repotting.

We decided to put all of our "very special" bromeliads into the side courtyard where we could sit and admire them while having coffee and cake. This area is an open area with some old shade cloth over the top. Within one week some leaves started to curl. We thought the plants needed more water, but that didn't solve the problem. Within a couple of weeks more leaves were curling and changing colour. The leaves on one bromeliad changed to a luminous pink/red. My partner reckoned that I'd mixed up a bad batch of potting mix, so he made another batch and repotted the lot again. However, the leaves started dropping off onto the floor and it was a distressing sight. We no longer enjoyed going into that area and found another spot to have our "cuppa".

We lost the lot! For months we asked various experienced members what the problem was—but no one had an answer. I might add that the psychological effects on us varied. Our confidence was wobbly. We didn't buy any more plants. We avoided even looking at the monthly sales tables at the meetings. I was concerned that my partner wouldn't want to continue to try and grow them or even not want to go to meetings. But we both enjoyed the meetings so much and the people in the club that we persisted.

Then one night I was speaking to Peter Paroz on the phone and lamenting our loss. Well, Peter is an Industrial Chemist, a man with an enquiring mind and he just kept asking questions. Then he said, "Is there something dripping on them?" I told him that we had put old lattice panels over the top of the old shade cloth to provide extra shade. He replied that this was probably the cause as the plants had died so quickly due to the CCA treatment leaking out into the open cups of the bromeliads. This lattice was 20 years old!

At last we had found the probable cause. Peter asked me to do a controlled experiment to prove the case and to show members of the society. Two healthy neoregelias of the same type, health, and size were placed in two locations. One was placed under the "dreaded lattice" and the other was placed under a shady tree. The one under the lattice was dead within 3 weeks. The other still lives.

I sought some information on CCA treated pine and found that CCA is copper, chrome and arsenic which is impregnated into the wood. Even though, initially, the wood preserving industry insisted that this process locked the chemicals into the timber, scientific evidence now shows that these chemicals do leach out into the environment (hence the luminous pink bromeliad leaf was the result of drinking the copper). CCA treated timber is no longer allowed to be used for children's playground equipment due to the leaching of chemicals.

It is illegal to burn CCA treated pine as the smoke contains toxic gases. However—it is a cheap building material—especially in white ant areas. With great care it can be used. It can be sealed with a good quality timber paint or with a special sealer. Ask at your local paint shop. However, be wary of drilling holes in this timber as water will run into the holes, collect the chemicals, then run along the outside and drip into your plants. (Yes, you guessed it, we found this out by experience too!). Look for black marks on the leaves where the poison has splashed onto the leaf. Remove immediately from that area, wash out the cups, refill with clean water and then keep your fingers crossed.

So, yes, you can kill a bromeliad, but, hopefully, you can't kill enthusiasm, determination and dreams!

SOME OBSERVATIONS ON GROWING BROMELIADS FROM SEED

By Paul Turvey, a member of the Alcantarea forum led by Rob Smythe of Townsville and reported in a thread dated November 6, 2019. (Paul lives in the Sutherland Shire)

"*Rob, interesting stuff re the seed, and especially re the wet season up there. I've always collected my alcantarea seed dry so I've never faced that problem and always had good germination.*

However, I have come across something with other broms that might also be of interest. My experience of this has been specifically with Aechmea chantinii, but I guess it might happen with others as well and might explain some of my unexpectedly sterile batches of neoregelia seed. On several occasions with A. chantinii I have had seed start to germinate when allowed to remain moist within half an hour or so of exposure to strong light—i.e., in these guys immediately after squeezing the seeds out of the berry and exposing them to my head torch at close range so I can see what I'm doing with magnifying specs on. This start to germination is only visible under magnification and it is indicated by the slight splitting of the seed coat at one end with a tip of the embryonic root barely visible. I have actually watched this happen from zero to visible under magnification during the first half hour of handling the seed.

If those barely germinating seeds are immediately sown they continue to germinate and develop rapidly. However, if they are then dried out the embryos are killed because the seed coat has been opened and they desiccate completely, so the seed appears to have been sterile when in fact it wasn't, it had started to germinate then I killed it by drying out the now-exposed embryos.

Now, seeds of Alcantareas and Aechmeas are very different, but if Alcantarea seeds have also evolved to start germinating as soon as they get a combination of moisture plus strong light, then maybe something similar could be happening there up in the wet tropics when the splitting pods get rained on?"

MOSQUITO MIX?

By Robert Meyer – Reprinted from the Bromeliad Society of South Florida's *BromeliAdvisory*, June 2017

Sandy [Roth] found this mosquito-repellent recipe on Facebook: *Big bottle Blue cheap mouthwash, 3 cups Epsom salts, 3 stale 12 oz. cheap beer. Mix those three ingredients together until salt is dissolved. Spray anywhere you sit outside. Good around pools. Will not harm plants or flowers. Mosquitoes gone from that area for approximately 80 days.*

Epsom salts is Magnesium Sulphate [$MgSO_4$] a very soluble form of salt. If you foliar feed with Epsom salts, having too much in the spray solution will burn the plant's leaves fairly quickly when the sun comes out. Why? Because Epsom salts affects plants in the same way that table salt or any other solute affects a plant's ability to absorb water through cell walls.

But beware, Epsom salts can burn. One person found that 1 tablespoon per gallon burned succulents. But that was because it was mixed with fertilizer. A tablespoon of Epsom salts alone probably isn't enough to do any damage, unless you used it in your fertilizer solution, or there was already a high level of solubles in the soil solution.

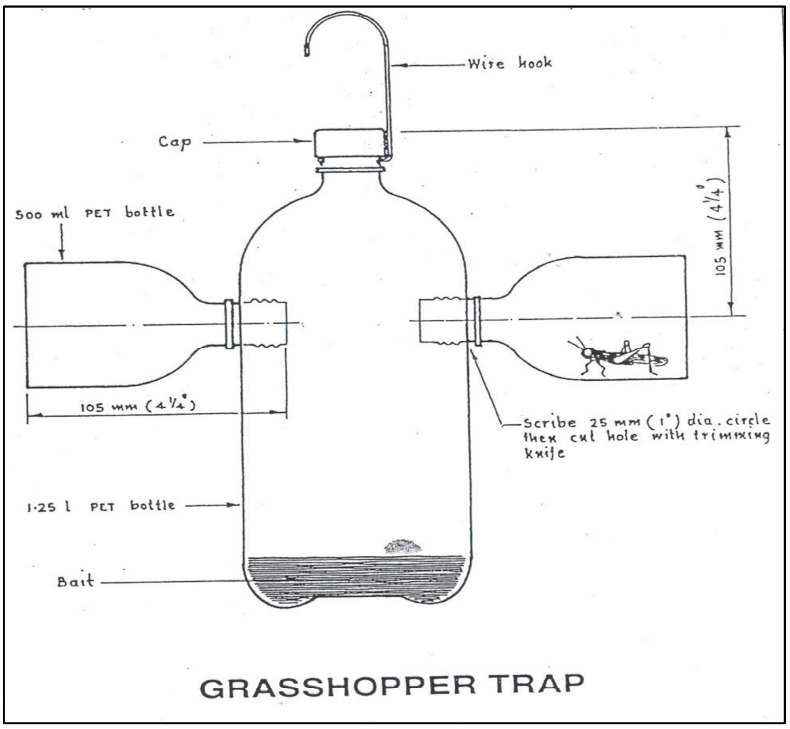
So the question is: What is in the mouthwash or stale beer which is akin to fertilizer. If nothing, then the solution should be burn proof.

- Mouthwash's active ingredients include Chlorhexidine Gluconate, Triclosan, Thymol, Cetylpyridinium Chloride (CPC), etc.
- Cetylpyridinium chloride is a cationic quaternary ammonium compound used in some types of mouthwashes, toothpastes, lozenges, throat sprays, breath sprays, and nasal sprays. Essentially, the addition of this product will attack bacteria.
- Stale beer has numerous "other" uses. The fermented sugars in beer stimulate plant growth and kill fungi. Spraying either home brew or Rolling Rock (both are chemical-free) may be best for what is demanded in this case, but that would mean more money. Plants will absorb the sugar in the beer and draw energy from it.

To be safe, use very low dosages. Or dilute the recipe listed in the first paragraph. Good luck.

THE GRASSHOPPER TRAP

Reprinted from ***Bromlink,*** newsletter of the Gold Coast Succulent and Bromeliad Society Inc., May/June 2005 issue.



Above is a grasshopper trap and instructions sent along by Frank Gaudron.

1. You need: 3 x soft drink bottles (at least 1 bottle should be 1.25 litre capacity).

2. In one bottle cut 2 x 25 mm (1 inch) holes, diametrically opposite each other and located on the parallel side of the bottle closest to the top.

3. Cut the tops off two similar or smaller (500 ml) bottles at a point giving approximately 50 mm (2 inches) of parallel sides which will provide a level landing platform for the hoppers. If the holes have been cut correctly, you should be able to screw the half bottles into the holes and they should stay there.

4. Mix up the sauce to bait the trap: 1 part honey
   1 part vegemite
   20 parts hot water

5. Mix well, allow to cool, pour into the trap and stand or hang it in a strategic position.

2020 PROGRAM

February 1	**Report on 2019 Bromeliad Conference – Gold Coast**	**Edwina Wain**
February 22	**Garden Visits #1**	
March 7	**"Bigeneric Bromeliads"**	**Michael Drury**
March 14 – 15	**Plant Sales Day – Warilla**	
April 4	**"Bromeliads or Minerals"**	**Noel Kennon**
April 18	**Workshop #1**	
May 2	**"Our Library"**	**Michael Drury**
May 16	**Garden Visits #2**	
June 6	**"Mounting Tillandsias"**	**Graham Bevan**
July 4	**Christmas in July – Soup 'n Sweets**	
July 18	**Workshop #2**	
August 1	**Annual General Meeting**	
August 15	**Workshop #3 – Taking pups and growing Bromeliads from seed**	**Michael Drury**
September 5	**Monthly Meeting**	
September 11-13	**Annual Show – Uniting Church Hall, Corrimal**	
October 3	**Monthly Meeting**	
October 17	**Garden Visits #3**	
November 7	**Monthly Meeting**	
November 21	**Workshop #4**	
December 5	**Christmas Party**	

UPCOMING EVENTS . . .

March 28 - 29	**THE COLLECTORS' PLANT FAIR – HAWKESBURY RACE CLUB, CLARENDON** Saturday 8 am – 4 pm ($15 at gate)/Sunday 9 am – 4 pm ($13 at gate)/Weekend pass $25. Reduced rates to $14/12/and $20 respectively for online bookings. <collectorsplantfair.com.au>
May 9 - 10	**BROMELIAD SOCIETY OF AUSTRALIA AUTUMN SHOW – FEDERATION PAVILION, CASTLE HILL SHOWGROUND** – Saturday 9 am – 4 pm/Sunday 10 am – 3 pm.
June 9 - 13	**WORLD BROMELIAD CONFERENCE 2020 – HYATT REGENCY, SARASOTA, FLORIDA**
Sep. 12 - 13	**ILLAWARRA BROMELIAD SOCIETY SPRING SHOW – Uniting Church Hall, CORRIMAL**
2021	
April 8 - 11	**KIWI BROMS – 21ST AUSTRALASIAN BROMELIAD CONFERENCE, AUCKLAND, NZ**