

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

Edition: May 2022

Agenda: General Discussion

Venue: PineGrove Bromeliad Nursery
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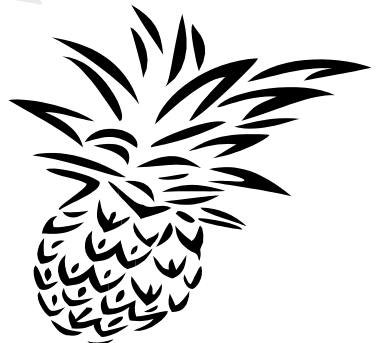
Study Group meets the third Thursday of each month
Next meeting June 16th 2022 at 11 a.m.

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Meeting 21st April 2022

The meeting was opened at approximately 11.00 am
The 13 members present were welcomed.
Nil apologies.

General Business

Another month has gone by and the rain still hasn't let up, what more can I say other than gardening in a rain coat isn't comfortable but most everything in the garden is growing well. We were lucky the rain held off long enough to conduct our meeting in comfort.

Some recent chat on various forums/plant platforms had been about including exact habitat collection locations. We believe when discussing plants that this practice not be done. We must remember that some species are very vulnerable with their habitats being destroyed, so the less exact information we give out that plant thieves may act on, the safer these vulnerable species may be.

With the onset of cooler weather now, we should start to see some leaf colour change in our *Alcantarea* which seem to be enjoying the constant wet weather they've been experiencing. The green foliage of summer on our *Alc. vinicolor* and its hybrids is starting to turn red as with *Alc. Imperialis*, its variants and hybrids also beginning to turn red.

Show, Tell and Ask!

A discussion was had reviewing the article published in last months Newsletter on stigmas, the variety of stigma shapes surprised everybody. Most comments inferring more notice will be taken when admiring their flowering plants in future. The other interesting feature discussed was the fact that a pollen grain itself doesn't make its way down the stigma tube but grows a tube that contains the sperm and makes its way down to the ovary.

An often asked question about pup production or seed:

If your plant is a hybrid the only way you're going to reproduce a replica plant is by asexual reproduction, without sex, vegetative propagation i.e. pups. Growing seed from a hybrid will give mixed progeny and can't be named as per the seed parent plant. Reproduction by seed is of course the most productive method if large numbers of plants are required, albeit a much slower process.

Some plants if fed well will give an abundance of pups. However allowing the plant to flower uses a lot of its stored energy which the plant could have put into pup production instead. By removing the spike when it first initiates and then fertilising the plant well, this will assist in greater pup production.

Spiralling - why do some bromeliads spiral and others don't ?

I've always understood the issue to be the longer it takes for a *Neoregelia* to flower the more leaves it grows which has a tendency to cause spiralling this allows the next leaf below to get its share of light. David Benzing explains this on page 90 of his book *The Biology of the Bromeliads*, under 'leaf multilayer':

"Most mature tank formers bear more than a dozen broad, closely overlapped leaves on a telescoped stem, and thus are poorly equipped to intercept direct light from above or scattered PAR from the sides and below. Considering the narrowest planar dimension of a tank leaf is its width, and that, depending on the species, the thickness of the entire leaf display is no more than 10 – 15 times that distance, self-shading could be a serious problem. It would not be surprising, therefore, to discover that various qualities of foliar form, opacity and physiology have been adapted to compensate for these encumbrances in the evolutionary trade off process".

The longer the flowering cycle is delayed the greater the leaf stack which causes the spirals. Plants grown closer to the equator tend to display this effect.

Some *Neoregelias* reported to spiral regularly even in our area:

Neoregelia 'Burnsie's Spiral' just grows and grows and spirals a bit because its narrower leaves don't cause an issue with shading.

Neoregelia 'Spiralis' I have never seen it spiral. Rarely seen in collections.

Neoregelia 'Rien's Pride' I've never had that spiral either.

Ian had a few queries this month beginning with *Goudaea ospinae* var. *gruberi*:

Is its lanky trunk normal and how to deal with it ?

This is quite normal behavior for this species.

Why? possibly, as the plants trunk grows taller the head of the plant gets heavy and leans or falls over to touch the ground further away from the mother plant. This enables the plant to spread via asexual reproduction, a much safer method of reproducing as the offshoots have a guaranteed food source from the old mother plant. Seed can reproduce in greater numbers and spread over larger distances. By not having mother as a food resource to rely on once dispersed and if the seed lands in a less favorable location than preferred they may not all survive. Sexual reproduction also helps maintain the genetic gene pool.

The trunk can be cut anywhere along it, allow it to dry or heal over and plant as normal. The root stock may also reproduce from the remaining trunk so don't ignore it, feed it and take care of it too. If your plant has flowered and is starting to produce pups, feed the plant and allow the pups to grow to about half the size of the mother plant before attempting the trunk cutting method.

As *Goudaea ospinæa* var. *gruberi* are one of those plants often referred to as "upper puppers", their pups can be a little more daunting for the faint hearted to remove. Unlike many bromeliads that produce their pups at the base of the plant or in the lower leaf axils giving easy access, this species produces its pups up at the base of the inflorescence. These are still relatively easy to remove, firstly by removing the lowest leaf first and work your way up, leaf by leaf to the base of the first pup which should be about half the size of mum. Gently ease the pup away from mum a little allowing your knife to cut down the gap parallel to the mother and slightly inward, so as not to cut the pup short. Remove the next layer of leaves and repeat the process until all pups have been removed. Allow them to heel over/let the cut dry for a day or so and pot as per normal.

Next time as you have gained confidence in removing pups, you could try just splitting the lower leaves along their length to expose the base of the pups. When the base of the pup is visible, try to cut it away causing as least damage as possible to the mother plant. A longitudinal split in the leaf won't do too much harm, the leaf can still photosynthesize, whereas if the leaf is broken across, this interrupts the food chain. Treat the pups as previously suggested and foliar feed the mother and hopefully gain another round of pups.

A flyer from an unknown source was handed around that was offering advice on watering newly planted plants and plants in pots. The query raised from this flyer was about its suggested use of detergents:

"Water 3 times a week (after planting) for 3 weeks with good squirt of dish washing detergent, and water in, twice weekly after that until established. Detergent is a wetting agent, it breaks down the surface tension of soil particles allowing the water to absorb through the root ball. Dry potting mix is hydrophobic. All pots on verandas/inside need detergent wash once a month, to wet all the mix around roots, stops ants, keeps plant roots happy."

Ed: exercise caution when using detergent, less is best, the use of water saving crystals would probably be a safer option.

The use of detergent (?) led us to Ian's next issue which he thought was quilling. If this was the issue a drop of detergent added to some lukewarm water poured into the centre of the plant and gently tease the leaves apart may have helped. This wasn't the issue for Ian's plant named *Neoregelia* 'Kings Ransom', this is normal behaviour for this plant which does have a tendency to 'crest'. Cresting is when the central leaves form a 'nest' and rise above the central cup.

A few comments from Geoff Lawn about the identity of Ian's plant: "There is some confusion between 'Medallion' and 'King's Ransom' -- the latter actually flowers, whereas 'Medallion' "never" does -- no blooming photo has ever been

shown to prove otherwise, world-wide after 50 plus years. The red "bracteate" leaves revert to green and the rosette keeps growing and pupping, up to 4 pups at a time but often only one. After some years, it forms a stem up to 50 cm tall.



Propagation can be by beheading the top and rerooting the rosette. Presumably if the beheaded stem still has viable roots, repotting the stem may produce further pups.

Neoregelia 'Medallion' is peculiar in as much as its "centre" never flattens and opens up like other dinner-plate growth *Neoregelias*".

It's up to Ian to note whether his plant flowers or not, if it doesn't photos are required - for proof of identity.

Label Confusion - Take a Little Care or Something.

Sometimes we get a little *confused* when writing labels and find *something* like a miswritten label can cause a little *confusion*, such were two cases recently. A *Neoregelia* brought to our meeting with no name was matched to a plant with the name *Neoregelia* 'Something' on its label. No match on the BCR, so an SOS for ID was sent out with the suggestion of *Neoregelia* 'Sometimes' being offered.

Thanks Geoff and Jen as that name is a good match. The other plant that caused some confusion that was found to have no match on the BCR was tagged as just that, *Neoregelia* 'Confusion'. Again we seem to have had another confused label writer, that one was actually *Neoregelia* 'Confused'.

If in doubt when writing your plant labels don't guess, refer to the relevant web sites listed here on p.16.



Neoregelia 'Sometimes'
not 'Something'



John brought along a few interesting plants for show this month.

Billbergia 'Bill's Baby' a hybrid created by Bill Morris in the 1960s, fantastic to see it still holding its place in collections all these years on.

John had in hand a *Tillandsia flexuosa* with viviparous pups growing along the old inflorescence. This is another method of spreading the pups further away from the mother plant.

Another plant John had to pass around was a very fragrant *Tillandsia crocata* with two very bright yellow flowers and a very pleasing perfume.

Next up was *Tillandsia punctulata*, a clump forming plant that ranges from Mexico through all of Central America. It prefers a cool, moist, shady location. The spike can be simple or densely digitate and vary in colour from reds to oranges with white tipped, violet petals.



Pinegrove hybrid ARL
grown by Coral McAteer.

Reported parents for this hybrid
created by John Buchanan are:

Vriesea 'Van Ackeri'

X

Guzmania retusa

A grex mate is *Vriesea* 'Ahab'
which doesn't exhibit evidence of
the recorded pollen parent.
Maybe Coral's plant will and can
be registered accordingly.



Vriesea 'Gulz'
grown by Michelle Hartwell.

Imported from Han's Gulz in the 1970s
as *Vriesea platynema* var. *variegata*.
When it first flowered it had a branched
inflorescence so the species name
seemed inappropriate. Distributed as
Vr. 'Gulz' so it was considered this
name should be recorded for posterity
(from the BCR). Quite an attractive
plant when grown well like this example,
it is definitely worthy of its place in any
collection today.



Vriesea platynema hybrid ???
grown by Keryn Simpson.

There has been many hybrids
created over the years using
platynema as a parent making it
difficult to put an identification on
them if acquired unnamed. The
BCR boasts 129 results but this
may only be a small percentage
of those released. Hopefully
somebody may recognise this
one and identify it for Keryn.





Neoregelia 'Yang'
1st Open John Crawford



Tillandsia tenuifolia
1st Tillandsioideae Gary McAteer



Pseudalcantarea viridiflora
grown by Mitch Jones



Tillandsia 'Cotton Candy'
grown by Keryn Simpson



'Tilly 'N' Shell'
1st Decorative John Crawford



Dyckia 'Frosty Sheba'
1st Judges Choice Mitch Jones



'Bunnies Easter Egg Hunt'
shown by Keryn Simpson



Tillandsia 'Fuego'
grown by Helen Clewett



'Another World'
shown by Mitch Jones

Pitcairnia oliva-estevae

Jason R. Grant sp. nov.

Journal of the Bromeliad Society International, 57(1): 19-21. 2007.



Mitch brought in to show us this beautiful Pitcairnia he has been growing. Francisco Oliva-Esteve first found this plant in 1995 with Bruno Manara growing in an area of the Andes at 1250 mts where the climate is temperate. Francisco returned in 1999 with Jason Grant and found the plant again which was described by Jason as a new species and dedicated to the co-collector of the type, Francisco Oliva-Esteve of Caracas, Venezuela.



Francisco has discovered numerous new species of plants and has written three important books on the bromeliads of Venezuela.

Pitcairnia maidifolia

(C. Morren) Decaisne in Planchon, Fl. Serres 9: 151, pl. 915. 1854.



Another attractive Pitcairnia species brought along by Mitch to show us. The type specimen of this one was collected by Funck and Schlim and noted in Linden Hortus, described by Morren.

It grows as a terrestrial and saxicolous in forests from 240 to 2225 m alt. in Honduras, El Salvador, Nicaragua, Panama, Costa Rica and northern South America: Guyana, Suriname, Venezuela, Colombia and Ecuador.

Pitcairnia have a clumping habit, many of them have vibrant upright spikes, some with pendant spikes, they make great garden plants especially when planted beside ponds where their arching leaves can afford shade and protection for fish.



In Search of a Very Special Species Part 1:

by Peter Tristram


Goudaea ospinae var. gruberi Luther

Confused with the title? That's because the new genus, Goudaea, was recently created for a small group of Andean Vriesea species following phylogenetic (DNA) and morphological reassessment. The two species are *Goudaea ospinae* and *Goudaea chrysostachys*, including the recognised varieties. Considering what a typical Vriesea flower looks like, think of *Vriesea carinata* or *fosteriana*, then it's no wonder *Vr. ospinae* and *chrysostachys* had to be moved into their own genus. They are quite unique and more closely related to *Cipuroopsis elata* and *Zizkaea tuerkheimii*, both ex-Vriesea as well!



The new classification of the Tillandsioideae, by Michael Barfuss, Walter Till, Elton Leme, Juan Pinzon, José Manzanares, Heidemarie Halbritter, Rosabelle Samuel and Gregory Brown, an international team of scientists, was only published in late 2016, though sneak previews had been around for a few years and José had even laid the groundwork for the changes four years ago at the Australasian Conference in Auckland, New Zealand.

Apart from examining DNA and applying traditional taxonomy, stigma formation is now a critical taxonomic tool.

Stigma type	Abbr.	Figs.	Description	Genus	Reference
Simple - erect	se	41, M	Lobes free, erect to subspreading, flat to navicular; margins entire to crenulate, straight to slightly undulate, papillate.	Catopsis, Cipuroopsis, Goudaea, Guzmania p.p., Josemania, Mezobromelia, Racinaea p.p., Tillandsia p.p.	Brown & Gilmartin (1984, 1989)
					
			Stigma of <i>Goudaea chrysostachys</i>		

Taxonomically, the small genus of Goudaea sits within a new subtribe, Cipuropsidinae, in the new tribe, Vrieseae, in the *Core* Tillandsioideae subfamily. More study is needed on the species in the proposed, closely-related genus, Cipuroopsis, which includes some well-known species such as *Vriesea elata* and *Vriesea rubra*. The eastern Brazilian Vriesea and Alcantarea (and the new genus Stigmatodon) are clearly split from the Andean genera, including Goudaea, Cipuroopsis and Lutheria.

Now to the story:

On my second trip to Colombia, in January/February 2016, among many other things, I planned to seek out and photograph *Goudaea ospinae* variety *gruberi*, a truly spectacular species of global horticultural importance. This beautifully tessellated species was collected by and named in honour of Colombian horticulturalist, Franz Gruber, a great of the bromeliad world.

Franz established the extensive nursery, Bromelias de Colombia, now managed by his children, Juan and Patricia.



No habitat photos have ever been published, to my knowledge, very likely as the area had been 'no go' for a long time.

Back in the 1980s, as an enthusiastic bromeliad collector and aspiring amateur brom 'scientist', the BSI's bimonthly Journal was a source of knowledge and inspiration for me. Latin America was (and still is!) a long way from Australia and a habitat trip to a country like Colombia was just a dream, so dreams were made browsing the fantastic journals (and the many other books) contributed to and written by so many adventurous and dedicated bromophiles.



Goudaea ospinae had fascinated me since Harry Luther told me its discovery in Colombia when I visited Selby Gardens in 1990. It was two years before it appeared in the BSI Journal and another couple before I was able to import some. It is true to say that 'Gruberi', as we affectionately call it in Australia, made an impression!

The 'normal' *Goudaea ospinae* was named by Harry Luther, in 1983, in honour of Berta Ospina, a renowned Colombian collector and horticulturalist. Before then labelled *Vriesea* Espirito Santo, it has been in collections since about 1980, coming to Australia from Kent's Bromeliad Nursery. This attractive, smaller species still features in many collections, making an ornamental crawling clump or ground cover adorned by a branched yellow inflorescence, as does the variety *gruberi*. It was described without locality but this detail can now be added to the species' information as we chanced upon large stands of it on the way to 'Gruberi' territory.

My first 'Gruberis' were almost a disaster. The plants were gassed with Methyl-Bromide, the usual nasty, cheap-option treatment of the Australian government, with over 50% dying and many of the survivors suffering from burning and centre damage. Of the hardy survivors, tolerance to a period of near-zero winter night temperatures the following year was the next test, which most passed with flying colours, eventually thriving, flowering and pupping, thus becoming much of the stock seen in many collections in Australia. One clone in particular, a vigorous plant with white leaves and stunning markings, I named 'Tiger Tim' after my then young son. Many other clones have been named now, primarily from my original plants or from seedlings from Tiger Tim and clones I later obtained from Chester Skotak and Peter Bak. The range of shapes, sizes, colours and patterning is now almost endless.

Jump forward to 2015 and a plan to visit Colombia again was hatched. I contacted my intended driver, Aldo Brando, an experienced driver/guide, professional photographer and mountain climber and determined the dates, including meeting up with Chester Skotak for the second half of the trip. Chester had not visited Franz at his nursery in Fusagasugá for a very long time, so much reminiscing was also in the plan.

My intention was to explore both sides of the Cordillera Oriental, the eastern Colombian range, especially to the north of Bogotá and include the necessary roads Franz had told me to travel.

Though there are few roads going east onto the Orinoco plains from the high central plateau of the Cordillera Oriental, Franz had assured me that the road to San Luis de Gaceno, in the Department of Boyacá, was the one to travel to find the coveted 'gruberi'. Above the dam, the Represa Del Chivor, from the Páramo and its dwindling ice-age lakes, past Machetá, Gateque and Macanal, the climate is quite dry, a rain shadow area where many *Tillandsia* species feature in the rare remnant vegetation and ubiquitous Eucalypts. The entire area is now mostly cleared.



To be continued

Two Early Illustrations of Bromeliads

by W. H. Hodge

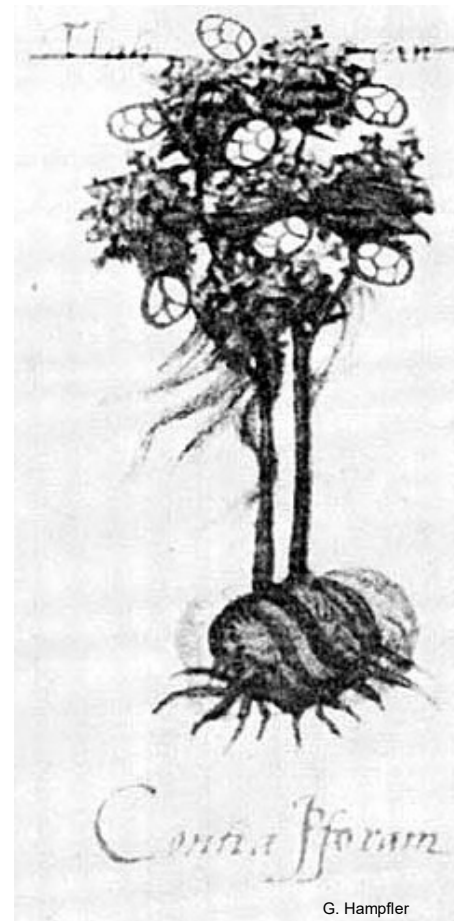
Some remarks by friend and former associate Dr. Lyman B. Smith in the February, 1960 issue of this Bulletin have inspired this brief comment about some early reports and illustrations of bromeliads. As an "all-American" family of plants, bromeliads, individually or collectively, were unknown to white men prior to the discovery of America in 1492. Dr. Smith suggests that bromeliad records must have been made very soon after the discovery. This is, of course, correct. Two "bromels" now very familiar to us all were involved, the pineapple (*Ananas comosus*) and Spanish Moss (*Tillandsia usneoides*). Utilitarian plants would have been especially noted by explorers whose primary interests in those days were species that might prove useful and might bring wealth to the discoverer. As one might expect, that queen of all indigenous tropical American fruits, the pineapple, found its way very early into the records. As a matter of fact, it was first observed in the West Indies during the Columbian voyages, though strangely enough no mention is made of it until Columbus' second voyage in 1493. I say "strangely" for it would be unusual if a fruit as palatable as the pineapple had not been widely carried in pre-Columbian time from its original South American home to all parts of the West Indies, including Cuba and Hispaniola, which were visited during that October, 1492 to January, 1493 period, when Columbus was in the New World after his spectacular discovery. Apparently the pineapple was not observed during that first exciting year.

Not until early November of 1493, shortly after making the first landfall (Dominica) of the second Columbian voyage, was the pineapple first introduced to European palates. The place was a cove near the southernmost tip of Guadeloupe, now a French Antillean possession. According to the records "the flavor and fragrance of this strange fruit astounded and delighted them"



An Island Carib Indian (foreground) presenting a pineapple to a Spanish Dignitary in the Lesser Antilles (frontispiece from Rochefort's *Histoire Naturelle et Morale des lies Antilles de l'Amerique*, 1665).

(the Spaniards). The Indians who were growing pineapples on Guadeloupe were the fierce Caribs, who for so many years were hostile to European penetration into the central Caribbee isles. By a modern coincidence, on nearby Dominica - scarcely 50 air miles distant from Columbus' first contact with this fruit - pineapples may still be seen growing in the gardens of the last descendants of those Island Caribs who nearly 500 years ago grew the fruits which so delighted the exploring Spaniards. Some years later, in 1665, an engraving, apparently depicting this historical event, appeared in one of the early accounts of these islands. The plate (here reproduced) shows a kneeling Carib presenting a pineapple to a European dignitary. Actually, the famed chronicler, Oviedo, had described and accurately illustrated this fruit over a hundred years earlier, in 1535.



An early illustration including Spanish Moss, shown hanging from a Mexican Cypress Tree. (From the Badianus Manuscript, 1552)

Early authentic descriptions of Spanish Moss are not known to me, but there is a very interesting illustration (see figure) showing that this most unusual of our American bromeliads was figured in 1552, only 17 years after the appearance of Oviedo's pineapple picture.

The illustration in question is from the Badianus Manuscript, a remarkable 16th century herbal, prepared in 1552 by two Aztec Indians, describing and illustrating "medicinal plants and native remedies" of pre-colonial Mexico. Discovered in the Vatican Library in 1929, this long overlooked manuscript was finally published in full color in 1940 by the John Hopkins Press. On one of the color plates in this herbal wisps of gray-green Spanish Moss appear hanging from the cone-bearing crown of a Tlatzcan tree or Mexican Cypress (*Cupressus benthamii*), the bark of which was believed to be a specific against psora, a skin disease. The bromeliad is not listed as a specific; it was added by the Indian artist to give a more naturalistic look to his sketch.



Reprinted from: BSI Journal 1961, Vol.11.No.5

Open Popular Vote

1st	John Crawford	<i>Neoregelia</i> 'Yang'
2nd	Mitch Jones	<i>Dyckia</i> 'Frosty Sheba'
3rd	Keryn Simpson	<i>Vriesea</i> platynema hybrid
3rd	Michelle Hartwell	<i>Vriesea</i> 'Gulz'

Tillandsioideae

1st	Gary McAteer	<i>Tillandsia tenuifolia</i>
2nd	Mitch Jones	<i>Pseudalcantarea viridiflora</i>
2nd	John Crawford	<i>Tillandsia punctulata</i>
2nd	Keryn Simpson	<i>Tillandsia</i> 'Cotton Candy'

Decorative

1st	John Crawford	'Till 'N Shell'
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Judges Choice

1st	Mitch Jones	<i>Dyckia</i> 'Frosty Sheba'
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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 : <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.