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

Edition:

April 2020

<u>Agenda:</u>

General Discussion

Venue:

PineGrove Bromeliad Nursery 114 Pine Street Wardell 2477

Phone (02) 6683 4188

Study Group meets the third Thursday of each month

Next meeting 21st May 2020 at 11 a.m. To be advised

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Statements and opinions expressed in articles are those of the authors and are not necessarily endorsed by the Group. Articles appearing in this News Letter may be used in other Publications provided that the source is credited.

Meeting 19th March 2020

There was no meeting for March due to coronavirus Covid-19.

All of our regular attending members were contacted via e-mail or telephone with all agreeing that to err on the side of caution would be sensible at this stage.

Take care, stay safe and well everybody in these dire times and we'll go back to basics here to answer questions asked by some newer members of our fold.

Plant Names, and How They Got That Way

Reprinted From Hunter District Newsletter, June 2001. In part, Bromletter Nov/Dec, 2002, vol 40, No 6.

The current binomial system of botanical names was developed by a Swedish botanist, Carl van Linne, better known as Carolus Linnaeus, in the 18th century. In this system each plant is given two names: Genus (comparable to an individuals family name), and SPECIES (like the given name), often an adjective describing the plant. Plant names are written in Latin (well, sort of !).

Plant Latin is a rather curious mixture of classical Latin and Greek, words from several other languages, and names of men, women, or locations, usually given more-or-less Latinized endings.

If this person is male his name is latinized and will finish in 'i'.

eg: Tillandsia bergeri after A. Berger, a German succulents researcher.

If a person is female the name will usually finish with 'ae'.

eg: Neoregelia carolinae after Caroline, wife of Edward Morren.

If the epithet is geographically derived, it will usually terminate in 'ensis', 'insus', or 'icus'.

eg: Hectia guatemalensis, occurring in Guatemala.

Among bromeliads more than half the genera are names for people or places; two (Nanas and Puya) are derived from native names of the plants and the rest are Latin or Greek descriptive terms.

Plant names are written genus first, followed by species - then sometimes by variety, subspecies, or forma. Sort of like, "Last name, first name, middle name last" on government paperwork. "Variety is seen frequently, "subspecies" and "forma", seldom.

That's simple enough, but we're not done yet! There are rules concerning capitalisation, use of *italics*, and names of hybrids - not to mention bigenerics and cultivars. By the time you finish this, you should have a basic knowledge of botanical nomenclature (or maybe just a headache!).

Basic Rules:

- Genus: First letter capitalised. Maybe abbreviated
- Species: All lower case
- Variety:
- All lower case, preceded by "v" or "var." All lower case, preceded by "ssp." Subspecies:
- Forma:
 - All lower case, preceded by "forma"

• Natural Hybrids: (Yes, there are a few of these) Given Latinized names, with the specific name [specific epithet] (all lower case) preceded by an "x".

Two cross-pollinated bromeliads of two different genera Bigenerics are given their own name made up from letters of the two parents' genera, preceded by an 'X' - e.g. a cross between a Neoregelia and an Orthophytum would be X Neophytum.

Some Examples:

- = Aechmea fasciata, or Ae. fasciata
- Species Varietv
- = Nidularium innocentii var, lineatum = Tillandsia schiediana ssp. glabrior
- Subspecies Forma
- = Tillandsia fuchsii forma gracilis
- Natural Hybrid = Tillandsia x smalliana
- Bigeneric = x Neophytum 'Galactic Warrior'

Some horticulturally interesting (but insignificant) variations of species may be selected and given cultivar names. For example:

> Aechmea lueddemanniana 'MEND', or Aechmea 'MEND [or Aechmea lueddemanniana cv. MEND - Ed.]

[Perhaps this was not the best example to have given because in this case the cultivar name, 'MEND' is written all in capitals, the name derived from:

- M Mildred Merkel
- E Edward Ensign who sowed the seed
- N Julian Nally who gave the seed to Ensign
- **D** in memory of Ralph Davis

Whereas the more usual form of writing the name would be:

Aechmea gamosepala 'Lucky Stripes', or Aechmea 'Lucky Stripes [a sport of Ae. gamosepala with stable cream coloured margination, Ed.]

The name of the author who first described the species should be written after the specific name, and not in *italics*. eg: Tillandsia gardneri Lindl.

Abbreviations on Labels

When writing labels for your own use at home I feel it is fine to do this eg: *Aechmea* = Ae. or *Neoregelia* = Neo. or *Tillandsia* = Till. However I prefer not to see single letter abbreviations such as 'A', 'N' as the: 'A' could be for Acanthostachys, Aechmea, Androlepis, Ananas etc.

or the

'N' could be for Navia, Neoregelia, Nidularium or Neomea etc.

This can be confusing for novice growers, with experience we do get to know the difference between some of our plants by sight and get to understand the abbreviations. However when putting plants out for sale it is best to write the name in full. Think of a member of the general public wishing to find more information regarding their newly acquired *N*. 'Bossa Nova', how do you find that in an "index" but if the label had *Neoregelia* 'Bossa Nova' on it, the label information can be found a lot easier.

Searching the Bromeliad Cultivar Registry (BCR)

The BCR is an on-line registry of Bromeliad hybrids and cultivars only, it does not include species plants.

You have a plant in your collection that you want more information about or just checking that the name on the label is correct but you can't find it on the BCR. There are a number of possible reasons for this:

1: The name has been incorrectly spelt: think of all possible combinations of spellings and check them all. No result - ask at your local Society/Group.

2: The name has changed e.g: Neoregelia 'Black Knight'.

Entering black knight into the BCR search box = 19 results - 17 are Neoregelia, 15 are hybrids that have 'Black Knight' as a parent, two of them have another name added. This other name or name change has been added to differentiate the two different 'Black Knight' hybrids. Now we have 'Carrone's Black Knight' and 'Oeser's Black Knight' on opening each site one can decide which best fits the plant in hand. If still in doubt there are various internet forums to try or take your plant along to your local Bromeliad Society/Group and ask for help.

3: The plant may not be registered: refer back to the seller or to the hybridiser if known.

4: If your plant is a species, refer to: <u>http://bromeliad.nl/taxonlist</u> for the correct spelling of species names and up-to-date name changes.

5: For photographs of species plants you can refer to: http://bromeliad.org.au/

Guzmania andreettae Rauh, Trop. Subtrop. Pflanzenwelt 58: 46-8. 1986.

Holotypus: B.G.H. 53 008, Leg. FATHER ANDREETTA (s.n.), Cuenca, in the herb. Inst. Bot System. Univ. Heidelberg (HEID).

Habitat and range: Valle de Upano, near Loja (Morana-Santiago), fog forest, 1800 m, Prov. Cuenca, South Ecuador.

In part from: Jewels of the Jungle Bromeliaceae of Ecuador, José Manzanares

"Guzmania andreettae has red and green bands. The red bands have a higher content of anthocyanin (red pigment). With this system it can assimilate more light in the shade of the understory, its habitat. The red bands stop the passage of light toward the underside of the leaf and reflect it back towards the top thus allowing photosynthesis to take place a second time (Gouda 2000, personal communication)".

Guz. andreettae is a night flowering plant that has wide plate like white petals and has no noticeable scent.



Up Date on Recycling Plant Name Tags by Drew Maywald 2020

It is now 6 months since I rewrote my first labels, so I thought it was opportune to give you all an update. You may recall that because my plant labels had faded very badly, I looked at other ways to preserve them. I cleaned all my old labels with Orange oil, rewrote the labels with a 4B pencil, and then coated them with clear spray on lacquer (see FNCBSG December 2019 Newsletter ps.4 and 5). The attached photo shows two of these labels after six months of being exposed to the elements all day. As you can see the labels are still clear and easy to read and there is no sign of them fading. Apart from wiping the surface dirt from them I didn't clean these two labels before I photographed them, and they are typical of the labels on my plants anywhere in the garden.

So after six months my system is working a treat.



Removing Upper Puppers

by Drew Maywald 2020

The photos below are from *Orthophytum* 'Iron Ore'. This plant develops clumps of pups on stolons about 350 mm long. The photo on the left is a clump of young pups with very small white flowers that emerge from the tips of the young leaves. The leaves are predominantly green but are beginning to turn reddish brown on the tips and margins of the older leaves. Obviously these pups are too young to remove. However, the clump of pups in the photo on the right have changed colour to a reddish brown and are getting quite large. This is an excellent plant to have, if anyone wants one of the pups I am happy to swap it for another plant.

Left: A floret or a viviparous plantlet that will mature into a new plant that can be cut off at the



stem, allow to dry before potting.

Right: Mature pups ready to be cut off, allow to dry then pot as per normal.



Guzmania hollinensis

compiled by Ross Little 2020

Luther, J. Brom. Soc. 42(4): 168-9. 1992 (as 'hollinense' Pronounced: oy-yeen-en-see)

Type. Ecuador: Napo, new road Hollin-Coca, 1300 m, 27 Feb. 1988. *Luther, Kress, Roesel 1274* (holotype SEL; isotypes US, QCA, QCNE).

Luther "This very tall guzmania is locally abundant near streams and flooded areas where it grows both terrestrially and as a low epiphyte. Plants within a single population may have concolorous green leaves or some, usually a minority, may have striking bronzy red foliage. Sun exposure is not a factor as red plants may be lightly or very densely shaded.

The general aspect of the plant resembles a large, coarse grass or sedge especially when growing terrestrially in swampy areas. Except for its impressive size, this plant has no qualities recommending it as a horticultural subject".



This particular plant grown and photographed by Ross Little was acquired quite a number of years ago as an "unknown Guzmania ? from Costa Rica".

Flowering now at 1.10 mtrs tall it appears to best fit *Guzmania hollinensis* with its cream petals and nocturnal flowering. No noticeable scent.

Pineapple Heads

I have been fortunate enough to get some pineapple heads from my greengrocer, with a view to growing them and getting fruit hopefully within 18 months.

To start the growth process off I put the base of the heads in a container of worm tea. Within four to five days



Drew Maywald 2020

each head had developed roots as shown in the photo, which has given them a great start as they seem to leap out of the ground once I plant them. I removed several layers of the bottom leaves before planting them.

If you don't have access to worm tea you could use a weak liquid fertiliser mix.

Pot Storage

Drew Maywald 2020

I had enough of trying to store my pots without them getting in the way or having them difficult to access. I got a couple of old security window screens and attached them to my fence in an area that doesn't get used, and it makes the



perfect place to store my pots, as you can see in the photo. The fence protects them from the wind so they don't blow over and I can arrange them by size and colour etc.

The security screens are light so there is not much weight on the fence. I also have a container full of small pots which I won't be using, so if anyone would like them let me know by return email.

Guzmania 'Tricolor'

A stunning plant originating from Europe as a variegated *Guzmania sanguinea* but not always showing variegation. Even though it's unstable it is still a desirable plant as can be seen here with this plant grown by Coral McAteer and photographed by husband Gary.

According to the BCR "it had been circulating under the invalid, unofficial name of *Guzmania sanguinea* var. *tricolor* for many years".



<u>Aechmea biflora</u> (L.B. Smith) Smith & Spencer, Phytologia 72: 96-8. 1992 Previously known as *Streptocalyx biflorus* L.B. Smith

Type. *Dodson & Thien 2070* (holotype WIS, photo US), tropical rainforest, Topo, along Rio Topo, 1300 m alt, Pastaza, Ecuador, 11 Jan 1962.

The striking plant below grew to 800 mm across and propagates by short stolons.



Grown and photographed by Ross Little



Aechmea biflora photo by Ross Little in Ecuador 2015

Rauh says:

"The most colorful species is the Ecuadorian *S*. (*Streptocalyx*) *biflorus* with its bright red inner rosette leaves providing a beautiful color contrast with the orangeyellow primary bracts and the pale blue flowers".

Understanding a Written Formula from a talk by Ross Little

When writing plant names there are some fairly basic rules to follow so that at a glance, in a written article one knows if the plant being referred to is a species or a hybrid. Some basic rules to follow are:

- 1) Genus begins with a capital letter and in italics e.g. Neoregelia
- 2) Species name is in lower case and in italics e.g. carolinae
- 3) Genus name for a hybrid as for (1) above
- 4) Hybrid name, first letter capital, name in quotation marks, e.g. 'Whirlwind'

Some basic rules also apply when writing a hybrid formula:

- 1) Seed / pod (female) parent should always be written first.
- 2) Pollen parent (male) second.

When writing a hybrid formula these rules help to easily identify when a species or hybrid has been used as a parent and which is the seed parent. In the following formula we can see that some species and some hybrids/cultivars were used as parents, however written as is, it is difficult to know what was crossed first.

carolinae variegated x 'Rafa' x 'Skotak's Tiger' x *ampullacea* x *tigrina* x 'Punctate Red'

Not wanting to write this much information all the time we can first shorten it by identifying the sets of parents by adding brackets and parenthesis, this will help identify hybrid names to then shorten the formula:

carolinae variegated x ('Rafa' x 'Skotak's Tiger') x (*ampullacea* x *tigrina*) x 'Punctate Red'

Following the bracketed parentage the shortened formula should read as:

carolinae variegated x 'Hannibal Lector' x 'Tiger Cub' x 'Punctate Red'

Add brackets and parenthesis again to identify the next set of crosses:

([*carolinae* variegated x 'Hannibal Lector'] x 'Tiger Cub') x 'Punctate Red' This formula gives the end result of *Neoregelia* 'Whirlwind'

This is what we refer to as a complex hybrid, however by adding the brackets and parenthesis in the appropriate places it has helped identify the parentage and make working out in which order each set of parents played their part in the final result as seed or pollen parent. To most growers this information isn't of that much importance, however to budding hybridisers it is very useful to help identify the end result of various combinations of parents, especially if brackets, parenthesis and parentage are incorporated into a formula correctly.

For the purpose of this exercise the generic name *Neoregelia* has been left off these formulae, don't forget to include this when writing labels.

As hybridizers are doing very complex hybridizing these days it is getting harder to distinguish just which individual plants have been used as parents unless a specific trait has been passed onto the new hybrid by each parent. For example has variegation been passed on, has banding / zonation or spotting / dots been passed on, these are easily distinguished traits to see which will indicate that the specific hybridizing program has been achieved. However, parental traits are not always obvious at the vegetative stage so a hybridizer needs to assess these results at the flowering stage also. As very few species are self fertile (meaning, will accept their own pollen) any seed collected from these plants has a fair chance of being hybrid. The only way to be sure of attaining purity in seed if this is desired is to do a controlled pollination in a secure location where no foreign pollen can get to the plant being pollinated. Sometimes to achieve purity a different clone of the same species is required.

Often when seed batches have been raised or crosses made, we see the notation after the plants name of F1 or F2 etc. The 'F' meaning filial.

F1 - first filial generation.

F2 - second filial generation; the progeny from the crossing or selfing of the F1.

Some general rules that should help you decide whether your hybridizing has been successful from: Checklist of Australian Hybrids and Cultivars including Notes for the Hybridist *compiled* by Derek Butcher, 1997.

- 1) True species x same True species = same True species
- 1a) True variety x same True variety = same True variety
- 2) True species x Self (own pollen) = same True species
- True species x another True species = F1 hybrid with consistent characteristics in each of the seedlings.
- 4) True species x Hybrid = F2 hybrid with inconsistent characteristics
- 5) Hybrid x Hybrid = F3 hybrid with inconsistent characteristic
- Hybrid x Self (own pollen) = F2 hybrid with inconsistent characteristics
- 7) Hybrid x same Hybrid = F2 hybrid with inconsistent characteristics

This list is a guide to help readers understand what the 'F' can mean when reading articles relating to hybrids. However different hybridizers have varying opinions as to the relationship of the 'F' regarding the creation of a new hybrid using two unrelated hybrids as parents. A complicated subject *!!!!*

Bromeliaceae - A Layman's Guide to the Sub Families and Genera.

Compiled by Drew Maywald

Recently published as a series of articles in the Far North Coast Bromeliad Study Group Newsletter, the Layman's Guide is now available as an illustrated book. This handy guide written in layman's terms, contains descriptions of seventy-five genera, including 17 genera not previously described in the articles. The book also includes over 70 coloured photographs and illustrations.

This book is available in two sizes A4 and A5:



A4 36 pages, with binding. Cost \$26.00 inc. postage within Australia. \$24 ex postage.

Bromeliaceae

A Layman's Guide to the Sub Families and Genera



A5 36 pages stapled. Cost \$16.00 inc. postage within Australia. \$14 ex postage.

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All profits from the sale of the book will be donated to the: Far North Coast Bromeliad Study Group NSW. (FNCBSG NSW)

Bromeliaceae – A Layman's Guide Part 6 continued:

Encholirium: pronounced enko-leer'ium, this entire genus is endemic to Brazil, occurring principally in the South American dry diagonal, with only a few species found on inselbergs within the Atlantic Forest. The centre of diversity of the genus falls within the Campos Rupestres of the Espinhaço Range of the state of Minas Gerais, followed by rocky outcrops found within the Caatinga and Cerrado biomes.

As of October 2019, there are 36 species in the genus. They are a saxicolous (grows on rocks), hardy genus discovered in 1819 by Dr Von Martius. The genus name is from the Greek "enchos" (spear) and "leiron" (lily), meaning "sword lily", and refers to its 1.8 metre flower stalk. Encholirium occur exclusively in arid, rocky conditions. Some species of Encholirium are limited in number and have been the focus of conservation efforts. For example, *Encholirium ctenophyllum*, is a species that exists in an area of 10 square kilometres.

These plants, which have been observed being pollinated by bats, are commonly confused with Dyckia, and are rarely seen in collections.

Fosterella: pronounced fos-ter-ell'a, Fosterella is a relatively new genus of bromeliad. It was established in 1960 by L. B. Smith, to honour Mulford Foster, one of the most significant people in bromeliad collection and hybridisation.

Foster was a naturalist, artist, landscape designer and horticulturist who contributed immeasurably to the bromeliad enthusiast community. It is estimated that Foster found and collected between 170 and 200 new species of bromeliad from South America. He also hybridised numerous new cultivars, many of which also bear his name. Through his writing and teaching Foster was incredibly instrumental in popularising bromeliads as both houseplants and landscaping plants in the United States.

As of October 2019, there are 34 species in the genus. However, new species are still being discovered and classified. Fosterella are found primarily within the arid to semi-humid lowlands and foothills of the Andes in South America. Peru, Bolivia and Argentina are the primary countries where they are found. A few exist in Brazil as well. There is one exception found outside of South America in southern Mexico. These plants are all terrestrial and live primarily on open forest floors.

Few Fosterella are exceptionally beautiful compared to other more popular species of bromeliad. Therefore, there are not many in cultivation for hobbyists and landscapers to collect. However, Fosterella produce pups generously and are easy to care for, making them ideal for quickly filling hanging baskets or containers.

Many Fosterella are characterized by their broad flat leaves. They are often discoloured, meaning they have one colour on the top of the leaf and a different colour on the bottom. Fosterella leaves are usually bright green on the top side and purple or burgundy on the bottom side.

Fosterella flowers grow on a stalk that rises above the plant. And some grow quite tall. The flowers are usually white or yellow, and occasionally pink. They are typically small and bell shaped, hanging down from the stalk.

Fosterella take their nutrients and water from roots in the soil, and so they require a nutrient rich potting medium, with good drainage as they are prone to root root if they sit in water.

Most Fosterella can handle a fair amount of sun with some shade. Full sun will likely damage the plants. Dappled shade is ideal. Because of their adaptation to arid or semi-arid climates, Fosterella do not require much water. Water them more frequently in the spring and summer and rarely in the winter. Fosterella do not require as much humidity as many other species of bromeliad, which makes them easier to raise in drier climates.

Pepinia: pronounced Pep-in'ee-a, the genus name is for Pierre Denis Pépin, French member of the Imperial and Central Society of Agriculture (c.1802-1876). Pepinia were classified as a sub genus of Pitcairnia by Lyman Smith and then elevated to a genus by Varadarajan and Gilmatin based on the absence of seed appendages. Taxonomists have recently merged this genus with Pitcairnia.

Pitcairnia: pronounced Pit-cair-nia, Pitcairnia were named in 1789 by L'Heretier to honour Dr. William Pitcairn, English physician and gardener (1711-1791). The genus ranks as the second most prolific of the bromeliad family, after Tillandsia.

They are most abundant in Columbia, Peru and Brazil, but can also be found in areas from Cuba, Mexico and south to Argentina. *Pitcairnia feliciana* is found growing on cliff faces in tropical West Africa, and is the only member of the Bromeliaceae family not native to the Western Hemisphere.

Almost all Pitcairnias are terrestrial (growing in soil) or saxicolous (growing on rocks), and prefer moist areas. However, some are also found growing epiphytically in trees. As of November 2019, there are 408 species in the genus.

Pitcairnia are found growing in moist, shady positions and they are very striking plants when in flower. Most of these plants are grass-like and for the most part smooth edged, lacking the spines generally found in other Pitcairnioideae genera. They bear tubular flowers with yellow, red, or white petals and although each flower lasts only a single day the rather tall, thin inflorescence will continue to bloom for several months.

The leaves of many Pitcairnias are spineless, while those plants with spines generally have small ones. The leaves of Pitcairnia are quite variable in length and shape. Some have several types of leaves on the one plant. Perhaps the most graphic example of this variation can be found in the deciduous species *Pitcairnia heterophylla*, where the leaves drop off at the start of the dry season to help the plant conserve moisture. The short brown spikes that remain are a primitive type of leaf that contains no chlorophyll.

Pitcairnias can be propagated easily either from seed or, for many species, by detaching a piece of the underground rhizome (taking care to obtain a piece with roots attached). The underground rhizome can be severed by either using a knife or, in some cases, a spade! Other Pitcairnias form bulbous-like growths that can be broken apart to provide new plants.

These plants will thrive if grown in a mixture similar to that used for most indoor plants. Re-pot the plants once a year. They typically like bigger pots for their size than other bromeliads. For example, a single offshoot of many species can often be grown into a small clump that requires a 250 mm bucket within 30 months.

Plants should be watered until water starts to flow through the base of the pot, at least three times a week in summer. Twice a week in winter should be adequate, except during periods of low humidity.

Pitcairnia leaves generally do not suffer from insect attacks, although grasshoppers can attack young leaves on rare occasions. However, aphids can cause significant damage to flowers.

Pitcairnias will grow well under 50% shade cloth in winter and 75% for the rest of the year. They also thrive in shaded, but well drained areas in the garden, but are unlikely to do well in situations that receive the full afternoon sun, especially in summer.

When grown in the ground, Pitcairnias relatively tall (usually 500 mm or more) green, grass-like foliage can form an effective backdrop to a garden.

References:

- Butcher, Derek, "Bromeliaceae and its eight sub Families"
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- Far North Coast Bromeliad Study Group (FNCBSG) Newsletter, Index Glossary.
- Wikipedia Pitcairnioideae.

• "A Bromeliad Glossary" second edition compiled by Pamela Koide Hyatt, Bromeliad Society International 1998. References continued:

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- Booth, Celeste, "Dyckia: A Prickly Pitcairnioideae", Bromeliad.info Plant Care.
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- Gardening Know How, "Dyckia Plant Info: Tips on Growing Dyckia Plants".
- Butcher, Derek, "Derek the Hybrid Detective. DD1006b Encholirium magalhaesii".
- Reilly, Bob, "Growing Pitcairnias and Pepinias", Bromeliad.org.au.
- Benzing, David H., The Biology of the Bromeliads.

Compiled by Drew Maywald 2019

Web Links for Checking Correct Identification and Spelling

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

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

Bromeliads in Australia (BinA): <u>http://bromeliad.org.au/</u> 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 to Find Bromeliad Groups & Societies Meeting 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.