

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

Edition: October 2020

Agenda: General Discussion

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

Study Group meets the third Thursday of each month

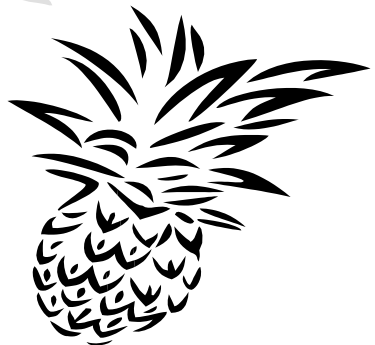
Next meeting 19th November 2020 at 11 a.m.

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## Meeting 17th September 2020

There was no meeting in September due to corona virus Covid-19.  
Take care, stay safe and well everybody in these dire times.

In this months Newsletter we have included a little bit of history for our newer members and a safety article for those on the land among our Group. The first article was featured in the Bromeliad Society International (BSI) Journal in 1951, since then a few names have changed or have been reassigned. The main reason for reprinting this article is Chas Hodgson's observations of growing conditions, a topic often discussed even today. Therefore we thought this article may be of benefit to some growers attempting to grow a wide range of genera in their adverse conditions. The scarcity of plants in those early days gave rise to seed growing and hybridising of Bromeliads in Australia to increase numbers.

There is an article about our native bees and their importance in our gardens.

On pages 14 - 15 is 'How to Deal With a Snake Bite', this one is due to my six encounters in seven days with Brown Snakes, yikes!! I know Keryn has had some encounters also, so take care when in the bush or in your shade house especially under your work benches.



Our Australian Trustee Mr. Chas. G. Hodgson in one of his plant houses examining a young plant of *Portea Petropolitana* var. *extensa* which he raised from seed.

## BROMELIADS IN AUSTRALIA

by Chas. G. Hodgson

My object in writing these notes is not to pose as an authority on bromeliads, but merely to give some indication as to the extent these beautiful and interesting plants are grown in this country. Looking back over a number of years of my association with private and commercial growers the number of bromeliad species distributed among them could be counted on the fingers of one hand. Over a long period of years hundreds of other exotic plants have been introduced into this country mostly by wealthy private growers who, in some cases, had large heated glass houses and a staff of gardeners. These exotics were housed more or less under the same conditions. A gentleman once remarked to me that he could not understand why some of his plants were thriving, while others were not. He said, "They all get the same treatment."

I said, "Yes, that is the trouble. You have plants collected from various parts of the world, from various conditions, all requiring different treatment; here you expect them to thrive under one condition."

I then suggested that he divide his house into three sections and to vary the heat and shade in each section, which he did with marked results.

That has been my observation, also, in regard to bromeliads in those that have been introduced here. It has been, truly, a matter of the survival of the most fit to put up with the conditions provided for them. This became very evident to me when I started to gather some of these plants. I already had a few plants of *Aechmea miniata discolor*, *Nidularium innocentii* var. *striatum*, *Nidularium amazonicum*, *Vriesia tricolor* (\*) with an unidentified *Neoregelia*. These were the five species referred to above, and represented the range of bromeliads in the various private collections under glass throughout Australia.

Aside from the conservatory or glass house collections the most common bromeliad here is *Billbergia nutans*. This species has survived the test of time. It is blessed with a hardy constitution. One sees it growing in all sorts of conditions, from humble tin dishes to teak orchid baskets, in the ground, in the sun, in the shade; known under various names from "Cactus fuchsia" to that "Pineapple Thing!" It is the "poor man's" bromeliad.

Looking at the few "broms" that I had growing with my orchids, I got an inspiration that I would like to get more of these plants and not being fortunate, like our worthy president who lives in a country where these plants are indigenous, I had to, as it were re-discover, or rather muster up the plants that were scattered about the country. My first objective was the Melbourne Botanic Garden.

In their large hothouses were the familiar five, but here and there amongst the other foliage plants were strangers such as *Aechmea fulgens* which was in bloom with its glorious long lasting flower spike. There were two different billbergias under the one label of *B. zebrina*. I was able to point out that one of them was *Billbergia vittata*. The billbergias were not happy, whereas the nidulariums and aechmeas were doing fairly well under the shade and moisture. The poor billbergias were rotting and for lack of light and a more airy condition, were open and colourless. Then I came across a few plants of *Tillandsia lindenii*. After coming to terms about an exchange with the man in charge, who is both a friendly chap and a keen grower, I secured *Aechmea fulgens*, *Tillandsia lindenii*, *Billbergia zebrina* and *B. vittata*. Next day I visited the gardens again, in order to comb over the outdoor bromeliads. There I saw *Ochagavia lindleyana*, *Pitcairnia sp.*, *Puya alpestris*, *Dyckia rarefolia*, *Dyckia sulphurea*, *Hechtia texensis*, all of which I had but I did not have *Bromelia serra* which I soon spotted. Although it was not doing too well I secured a small plant of it; since then it has developed into a fine specimen in my glass house where it seems to do better than on the outside because of our rather cold climate.

My next objective was to get some literature pertaining to bromeliads. Since my friend in the gardens was librarian to the Field Naturalists Club, I asked him to keep an eye open for any such literature. He eventually sent me a copy of a Smithsonian Institutions' Annual Report in which was an article by Mulford B. Foster. I said to myself that I would write this fellow. He might be a nice chap. And reply he did.

The fraternity among true plant lovers is stronger than Freemasonry. To make a long story short, as a result of contacting friend Foster, the exchanges of literature and plants added considerably to my knowledge and plant collection.

Then, fortified with a larger collection, and some surplus plants to barter with, I went to the Sydney Botanic Gardens where I received an introduction as an interstate visitor to the propagator. Naturally, we talked easily about the broms.

He had, in the houses, *Billbergia vittata*, doing well; *Aechmea weilbachii*, *Billbergia morelii*, *Tillandsia lindeniana*, *Cryptanthus zonatus* and another unnamed *Cryptanthus* with chocolate colored leaves; *Quesnelia liboniana*, and nice plants of *Nidularium innocentii* var. *striatum*, and *Neoregelia tristis*.

My next objective was the Adelaide Botanic Gardens. The city of Adelaide is much warmer and drier than Melbourne (where I reside) and is more subject to drought, during which time bore water is used (Australian for well water). This is fatal to some plants because of the lime content.

The Gardens in Adelaide had been very much neglected for some time. At one time they possessed a number of bromeliads but they had gradually died from time to time, until only the hard leaved varieties such as billbergias, quesnelias, neoregelias had survived. The Gardens are now under a curator who has been given a grant of money to make necessary improvements and he expressed the hope that he would be able to provide the proper accommodation to grow bromeliads. I supplied him with some of my surplus plants and in return received *Billbergia pyramidalis*, *Neoregelia carolinae*, *Quesnelia liboniana*, and some unnamed billbergias which I shall have to grow in order to identify them.

Queensland is the state where the "King of Bromeliads" (pineapples) has been made to feel at home and this delicacy is raised to the extent of supplying all the southern states with this fruit. Owing to the favorable tropical climate, (they have little need for glass structures, most tropical plants will grow luxuriantly) there should be some good collections of broms in the state, but so far as I can learn they are scarce. The Curator of the Queensland Botanic Gardens wrote me that they have growing there *Tillandsia lindenii*, an unnamed *Puya*, *Billbergia nutans* (which will cover a large area of ground if not checked), several unidentified billbergias and one or two aechmeas. We have agreed upon a favorable exchange of bromeliads.

I have sent a few bromeliads to a friend in North Queensland and he said that they are doing well.

West Australia has no Botanical Garden, but many parks and public gardens. A friend to whom I have sent a dozen broms has said that only *Billbergia nutans* is there.

After combing over the five states here in Australia I have come to the conclusion that, generally speaking, the bromeliads can be favourably adapted to Australia, especially in Queensland, and that there are probably not more than thirty or forty varieties in this country. There is a vast field for trade in bromeliads here, if and when the dollar embargo is lifted.

My increasing interest has lead me to possess, now, about forty species of broms as well as having created considerable interest in them in the four of our five states in Australia. Apart from the private growers, I have introduced new bromeliads to the Botanic Gardens where the general public can enjoy them, and in doing this I have made many new friends.

Reprinted from: BSI Journal 1951, Vol.1 (2)



## Mexico Tillandsia Sweep - part 5

by Ross Little

Before setting off on our travels we always research the areas we are going to so we know what other points of interest there are worth exploring other than only seeking our beloved Bromeliads. We found within reasonable travel time of our main destination of Oaxaca Mexico are two sites of ruins, a large tree and an amazing looking 'waterfall' that we should check out and more.

The first site we visited was Monte Albán, a large pre-Columbian archaeological site in the Santa Cruz Xoxocotlán Municipality which is approximately 9 km east of the state capital, Oaxaca City. Monte Albán sits on top of an artificially levelled ridge about 400 mts from the valley floor and 1940 mtrs above sea level.



Generally one looks at the stone buildings, temples and carvings however the site also supports a healthy *Tillandsia cucaensis* and *Till. recurvata* population.

The wood carvers and painters at David Hernandez's Workshop in San Martín Tilcajete, Oaxaca are incredible. Their woodcarving of Alibrijes, sculptures hand carved from copal wood and intricately painted by hand are of the finest quality. To watch these artists at work with what appeared to be single hair brushes for the finest detail e.g. a square inside a square inside a square....., amazing talent.



Miguel Fabian Galería de Barro Negro was our next destination to see how the elaborately carved black clay pottery is made. The black clay used has some unique properties that can only be found in the areas around San Bartolo De Coyotpec where there is a long history of using this barro negro (black mud). Each piece is shaped and allowed to sun dry then intricately carved, before firing it is also highly polished entirely or in parts to give it a black metallic sheen.



The only way I could bring a Bromeliad home was this "lady with a pineapple"

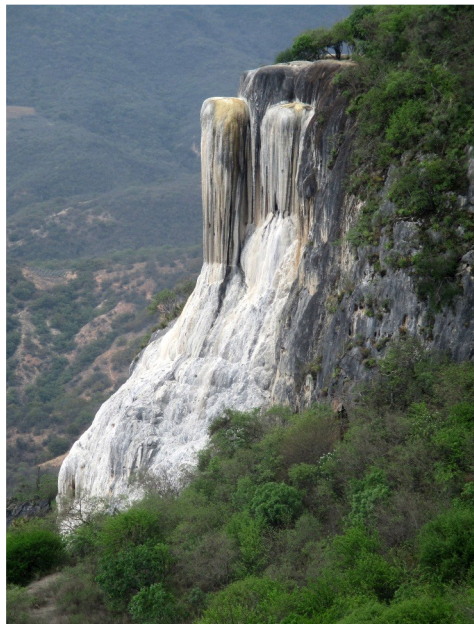




Árbol del Tule, the largest tree on earth is growing in the grounds of a church in the town of Santa María del Tule on the way to Mitla. In 2005, its trunk had a circumference of 42.0 m (137.8 ft), equating to a diameter of 14.05 m (46.1 ft), it is estimated to be around 1400 to 1600 years old and weighing an estimated 636,107 tons. One almighty big tree.



Continuing on our journey we made our way to the 'water fall', Herve el Agua which is an ancient geological site featuring towering, water fall-like rock formations that resemble cascading water, pools and springs. The site consists of two rock shelves or cliffs which rise between fifty and ninety metres from the valley below, the two falls drop 12 mtrs and 30 mtrs. These formations are created by fresh water springs, whose water is over-saturated with calcium carbonate and other minerals. As the water cascades over the cliffs, the excess minerals are deposited, much in the same manner that stalactites are formed in caves. Bromeliads were



plentiful in the area around the falls, firstly we spotted some Hectia sp.



As we made our way down to the base of the largest 'waterfall' we saw some yellow and orange *Tillandsia fasciculata* growing on the ground, in the trees and clinging to the cliff faces.



Many of the trees were adorned with:  
*Tillandsia caput medusa*,  
*atroviridipetala*,  
*recurvata*,  
*achyrostachys*,  
*schiedeana*  
and  
some unidentified  
Tillandsias.





After exploring the 'falls' we headed back toward Oaxaca City with a stop along the way having earlier spotted some *Tillandsias* growing on a rock beside the highway. We identified the plants as *Tillandsia mitlaensis* and more of the yellow and orange *Tillandsia fasciculata* were growing on the adjacent cliff face.



*Tillandsia mitlaensis* Weber & Ehlers Feddes Repert. 94: 617-8. 1983.

Habitat: Mexico, Oaxaca, vicinity of Mitla in saxosis alt. 1800 msm.



*Tillandsia mitlaensis* growing on a large boulder at roadside, turn 180° and we could see Mitla in the distance in the municipality of San Pablo Villa de Mitla.

*Till. mitlaensis* is closely related to *Till. circinnatoides* Matuda but differs in the only faintly nerved, not strong sulcate leaves, the dense coat of spreading white scales and the shape of the flower bracts.

**nerve:** A slender rib or vein, particularly if not branched. Nerved means that the veins are plainly showing.

**sulcate:** Grooved or furrowed lengthwise.

*Tillandsia circinnatoides* with coarsely sulcate leaves ►



With Mitla in sight and photographs taken of its namesake *Tillandsia* it was time to go and explore the ruins of Mitla. These ruins are the second-most important archeological site in the state of Oaxaca in Mexico, and the most important of the Zapotec culture. The site is located 44 km from the city of Oaxaca in the upper end of the Tlacolula Valley, one of the three cold, high valleys that form the Central Valleys Region of the state at an elevation of 1,480 mtrs and surrounded by the mountains of the Sierra Madre del Sur.

While Monte Albán was the most important politically of the Zapotec centres, Mitla became the main religious one in a later period as the area became dominated by the Mixtec. Mitla is unique among Mesoamerican sites because



of its elaborate and intricate mosaic fretwork and geometric designs that cover tombs, panels, friezes, and even entire walls of the complex. No other site in Mexico has this decorative work.



On another day we visited traditional weavers and a Mezcal factory, Mezcal is a distilled alcoholic beverage made from agave plants. Another story .....



## Australian Native Stingless Bees

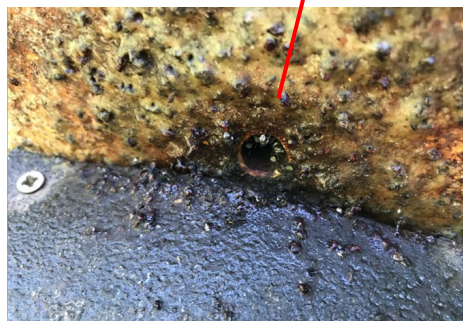
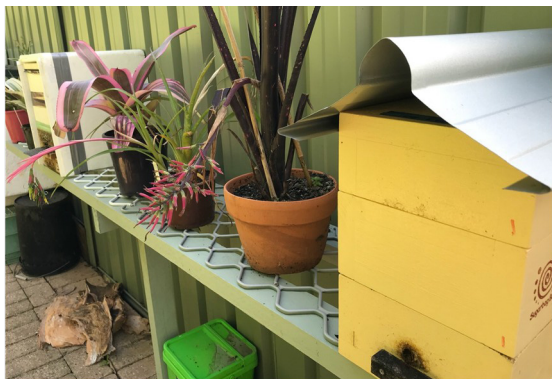
by Drew Maywald

I have always been interested in bees and have always wanted my own hive, so recently I purchased a honey bee hive and I have ordered my bees which I should get next month. However, I have also been interested in the native stingless bees, as I have a hive in a tree in the scrub about 5 metres from my garden, so I decided to purchase a couple of native bee hives as well.

The native bees that I have got are *Tetragonula carbonaria*. They are native to Australia and are about a quarter of the size of a honey bee. You can put them in a hive box and harvest their honey, however, they only produce about one kilogram of honey per year.

My two hives are in boxes 200 x 280 x 300 mm high, and because these wonderful creatures don't sting and take up very little space, they can be kept in your back yard.

*Tetragonula carbonaria* have been found as far south as the NSW/Victorian border but prefer subtropical locations, and are not suitable for cold climates. Generally, they are found, in cultivation in areas from Nowra north<sup>(1)</sup>, as they do not begin any foraging activity unless the temperature is above 18 degrees.



*Tetragonula carbonaria* at the hive entrance



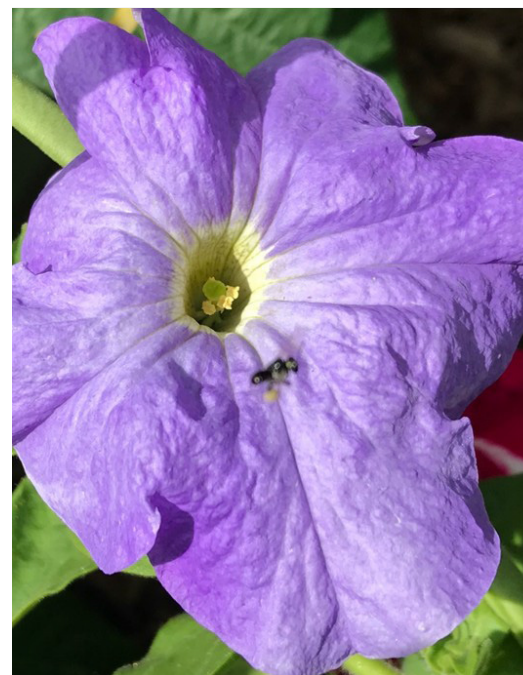
A native stingless bee <sup>(2)</sup>, *Tetragonula carbonaria*, carrying a full pollen load on its rear legs.

We all know the importance that bees play in pollination, and the native bees are no different. When my dragon fruit flower in the summer, it is very common to see 20 or 30 native bees inside one flower. However, I didn't realise what effective pollinators these creatures are until my Snow peas started to flower. I have grown Snow peas for some years and usually get up to 6 pickings from each trellis, however, this year I got 18 pickings from one trellis 1800 mm long. My lemon and lime trees have almost finished flowering and I have never seen the trees laden with as much young fruit as they are this year, and the only thing that I have done differently is introduce two native bee hives to my garden.

I have planted a range of flowers in one of my vegetable garden beds to help attract the bees, and I have counted up to 5 native bees inside one petunia. I grow Jolly Jump Ups, which I pick and swap for meals at a local tapas restaurant. Interestingly, the Jolly Jump Ups in my vegetable garden bed are producing nearly twice the number of flowers than those in other parts of the garden.

So, if you want to assist with the pollination of your plants get a hive of native bees, and you will also get some native bee honey which has health benefits that far exceed those of Manuka honey.

I am now making my own native bee hives and tapping into wild hives in the scrub behind me and helping friends do the same – but that's another story!



### References:

1: Heard, Tim, "The Australian Native Bee Book", Sugarbag Bees 2019.

2: The Cross Pollinator, Newsletter of the Australian Native Bee Association, Issue 13, August 2020, page 6.

A *Tetragonula carbonaria* on a Petunia flower in my garden.

Photos by Drew Maywald except where noted, (2).

## How to Deal With a Snake Bite

Ed: Just in the last week alone I have seen brown snakes every day, a few times I could've reached out and touched them, too close for comfort. As many of us live in bush environments I thought the following article written by Rob Timmings who runs a medical/nursing education business teaching nurses, doctors and paramedics is well worth the read as a timely reminder.

"That bite of summer has well and truly come early this year and with that heat, comes snakes.

3000 bites are reported annually.

300-500 hospitalisations.

2-3 deaths annually.

Average time to death is 12 hours. The urban myth that you are bitten in the yard and die before you can walk from your chook pen back to the house is a load of rubbish. While not new, the management of snake bite (like a flood/fire evacuation plan or CPR) should be refreshed each season.

Let's start with a Basic overview:

There are five genus of snakes that will harm us (seriously) Browns, Blacks, Adders, Tigers and Taipans.

All snake venom is made up of huge proteins (like egg white). When bitten, a snake injects some venom into the meat of your limb (NOT into your blood).

This venom can not be absorbed into the blood stream from the bite site. It travels in a fluid transport system in your body called the lymphatic system (not the blood stream). Now this fluid (lymph) is moved differently to blood. Your heart pumps blood around, so even when you are lying dead still, your blood still circulates around the body. Lymph fluid is different. It moves around with physical muscle movement like bending your arm, bending knees, wriggling fingers and toes, walking/exercise etc.

Now here is the thing. Lymph fluid becomes blood after these lymph vessels converge to form one of two large vessels (lymphatic trunks) which are connected to veins at the base of the neck.

Back to the snake bite site. When bitten, the venom has been injected into this lymph fluid (which makes up the bulk of the water in your tissues). The only way that the venom can get into your blood stream is to be moved from the bite site in the lymphatic vessels. The only way to do this is to physically move the limbs that were bitten.

Stay still!!! Venom can't move if the victim doesn't move. Stay still!!!

Remember people are not bitten into their blood stream.

In the 1980s a technique called Pressure Immobilisation Bandaging was developed to further retard venom movement. It completely stops venom/lymph transport toward the blood stream. A firm roll bandage is applied directly over the bite site (don't wash the area).

Technique of three steps and keep still:

**1:** Apply a bandage over the bite site, to an area about 10cm above and below the bite.

**2:** Then using another elastic roller bandage, apply a firm wrap from fingers/toes all the way to the armpit/groin. The bandage needs to be firm, but not so tight that it causes fingers or toes to turn purple or white, about the tension of a sprain bandage.

**3:** Splint the limb so the patient can't walk or bend the limb.

### **Do nots:**

Do not cut, incise or suck the venom.

Do not EVER use a tourniquet.

Don't remove shirts or pants - just bandage over the top of clothing. Remember movement (like wriggling out of a shirt or pants) causes venom movement.

DO NOT try to catch, kill or identify the snake!!! This is important. In hospital we NO LONGER NEED to know the type of snake, it doesn't change treatment.

Five years ago we would do a test on the bite, blood or urine to identify the snake so the correct anti venom can be used. BUT NOW... we don't do this, our new Antivenom neutralises the venoms of all the five listed snake genus, so it doesn't matter what snake bit the patient.

Read that again - one injection for all snakes! Polyvalent is our one shot wonder, stocked in all hospitals, so most hospitals no longer stock specific Antivenins.

Australian snakes tend to have three main effects in differing degrees:

**1:** Bleeding - internally and bruising.

**2:** Muscles paralysed causing difficulty talking, moving & breathing.

**3:** Pain - in some snakes severe muscle pain in the limb, and days later the bite site can break down forming a nasty wound.

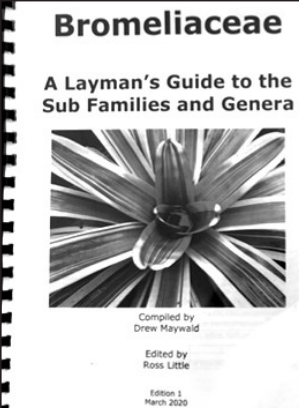
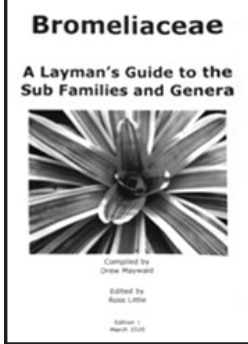
Allergy to snakes is rarer than winning lotto twice.

Final tips: not all bitten people are envenomated and only those starting to show symptoms above are given antivenom. Did I mention to **STAY STILL**".



It has been good to hear there has been some interest in Drew's booklet that he has compiled. This comprehensive look at the changes we have experienced over the last few years which we know many of us struggle to keep up with is very worthwhile having at hand, especially when writing labels. Having everything in one booklet rather than doing computer searches saves a lot of time and frustration.

Secure your copy from Drew via e-mail: [drewmaywald@gmail.com](mailto:drewmaywald@gmail.com)

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|  | <p><b>A4</b> 36 pages,<br/>with binding.<br/>Cost \$26.00 inc.<br/>postage<br/>within Australia.<br/>\$24 ex postage.</p> |  | <p><b>A5</b> 36 pages<br/>stapled.<br/>Cost \$16.00 inc.<br/>postage within<br/>Australia.<br/>\$14 ex postage.</p> |
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## Where to Find Bromeliad Groups & Societies Meeting Dates

**[www.bromeliad.org.au](http://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.

## Web Links for Checking Correct Identification and Spelling

Bromeliad Cultivar Register (BCR): <http://registry.bsi.org/>

Refer to this site for correct identification and spelling of your hybrid or cultivar.

New Bromeliad Taxon List: <http://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, Detective Derek Articles.

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