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

Study Group meets the third Thursday of each month

Next meeting 20th September 2012 at 11 a.m.

Venue: PineGrove Bromeliad Nursery

114 Pine Street Wardell 2477

Phone (02) 6683 4188

Discussion: August 2012

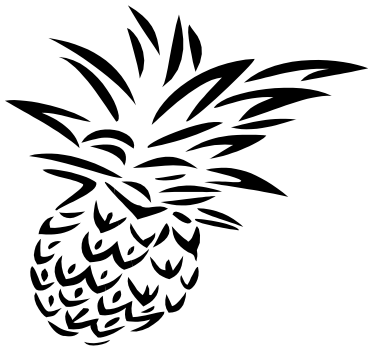
General show & tell

Editorial Team:

Don Beard

Ross Little & Helen Clewett

pinegrovebromeliads@bigpond.com



## Meeting 19th July 2012

Ron opened the meeting at 11:17am. Present were some 30 members, with apologies given for seven absentees. He introduced Sharon Song, an experienced bromeliad collector from Sydney who was visiting PineGrove and who had kindly offered to share some of her growing secrets with the group. Ron also mentioned that June was having eye treatment… we wish her well.

## General Business

Again the time has come to seek individual member's participation in the group's ongoing efforts to formulate informative and educational presentations. These presentations, as you know, are then converted to print and preserved via the monthly newsletter.
All members surely possess an interesting story regarding their broms, something that would assist the rest of us in expanding our horizons, or just make for an interesting tale.
Your editors are imploring each of you to make a contribution in this regard, particularly those more experienced senior members who have much to offer in the information stakes.

Thank you to those who supported the raffle, especially Joy one of our e-mail members for plant donations, also to the raffle winners. The raffle made $123.00

## Members' Show and Tell

Gary brought in a small plant, a green thin leaved rosette, which was very difficult to identify. It will have to be grown out, and it may turn out not to be a brom.

Jeanette showed a flowering *Billbergia nutans* which has been doing well for her. It originates from the Marie Selby Botanical Gardens in the U.S.A. Its leaves are not the normal 'apple' green one associates with *Bill. nutans*, but are thick and reddish. Jeanette also enquired as to how to gently treat soft scale. Laurie suggested a mixture of Methylated Spirits, water, and a dash of dishwashing liquid. Other suggestions included Malathion, Rogor (systemic), Confidor (kills bees), and Pyrethrum (safest) (see also newsletter April 2011 pp5, and 6-9 Canola White Oil, by Rob Smythe).

Dawn showed a *Billbergia* hybrid and mentioned she had some eight different types at home all different colours and designs and with different leaves and flowers. An I.D. was sought for the plant she showed.

Ross brought in a clump of *Neoregelia lilliputiana* with one of the plants flowering. Such a lovely large blue flower for such a small plant. (article p.4)

Shane displayed a clump of *Neoregelia* 'Hot Embers', one of the relatively new Skotak hybrids (2005) most of which are small, coloured, and variegated.

Our guest for the day Sharon Song from Sydney, spoke about her love of growing and collecting Dyckias, those tough, spiney, terrestrial, multi-coloured things that are very popular and useful in landscaping. Most originate in Central and South America and can occur in impenetrable clumps. Because of the armoury on these plants, pups are often problematic to remove, and weeding can be difficult. Sharon mentioned that there were about 130 known species of Dyckias and a very large number of hybrids. She finds them easy to grow as they can handle most soil types and potting mixes. They can also tolerate a variety of growing conditions including mild frosts and full sun. They in fact prefer full sun. The flowers are mainly yellow to orange with a diversity of inflorescence sizes.
She points out one interesting feature, the fact that Dyckias don't die after flowering. The flower spike comes from a lateral leaf axil rather than from the growing centre of the plant. Dyckias produce many pups. Dyckias are also very promiscuous and consequently purity of species is very difficult to maintain. They are very fast from seed to seedling (just a few months) and often germinate under the mother. Incidentally, seeds are easy to collect and can be grown in seed mix or scoria. In Sharon's experience those Dyckias grown hardest often develop into the best plants (isn't that the way with most broms?).
With the seedlings Sharon uses a good quality potting mix, something like a cactus or succulent mix (not an orchid mix). On potting or planting she feeds with Dynamic Lifter and/or banana peel. She never feeds the plant again. Though the Dyckias enjoy water, they will survive for a long time without it. When too dry, the tips of the leaves will brown off. They also enjoy good drainage and should be placed in larger pots than for other broms.
Sharon enjoys the variety of colours the plants produce e.g. purple, black, burgundy and green set off by a multiformity of spine sizes and colours. The only spineless hybrid she knows of, is *Dyckia* 'Naked Lady', a plant which is very slow to flower and does not appeal to her personally.
She believes the Dyckias are best displayed using shallow terra-cotta pots. Her collection includes a number of Bill Baker hybrids which are dark colours with white spines. She also loves Puyas and Hectias and from the looks of it, any spiney plant. She also has many Neoregelias in pots. Her garden is fairly open with shade cloth in some sections. The garden does receive the occasional frost.
One thing to note: We have it on good authority that Sharon's garden is a "stand-out". It is well established, well attended, and immaculate. If you are ever offered the opportunity to view her garden, do not hesitate to accept…….. It is a corker!
Thank you Sharon for your pearls of wisdom.

Ross, with Sharon assisting, demonstrated the removal of pups from a *Vriesea gigantea*. The procedure is best done with the plant out of the pot and with the basal leaves removed along with all the dead and scrappy leaves. This will expose the pups, which should be eased away from the axis of the plant and removed by cutting down and slightly into the mother. This should remove some roots with the pup if available while causing minimal damage to the mother.

The cleaned up mother with the pups removed should then be repotted in a slightly larger pot and kept fairly high in the pot. Prills of slow release fertilizer in each of the mother's leaf axils should help with additional pup production, in preference to roots. Water and re-label the plant and pups.

Moving up a grade, Ross and Sharon proceeded to demonstrate pup removal from a *Dyckia altissima* and a *Dyckia* 'Silver Sheen', they showed how easy it is to operate on these plants with minimal damage to hands, only one spot of blood spilt with many pups being removed. They demonstrated where and how to separate conjoined plants, not a job for the faint hearted, however a successful division was achieved (see "Dividing the Spinies" by Ross Little, FNCBSG(NSW) Newsletter July 2012, p15.).

## ***Neoregelia lilliputiana*** by E. Pereira

This tiniest of all *Neoregelia* was discovered by Roberto Kautsky in 1973, growing as an epiphyte in a devastated small forest in the Municipality of Dominguez Martins, State of Espirito Santo, Brazil.

This species somewhat resembles *Neoregelia ampulacea,* but is much smaller --- a mature plant reaching only 1 to 2 inches (25 - 50 mm) in height. It is propagated by pendulous 2 inch (50mm) long stolons. The small, fleshy leaves, approximately 1 inch long by 1/4 to 1/2 inch wide (25 mm long x 6 - 12 mm wide) are dull green with purple bands beneath and purple spotted above. The inflorescence has six to eight flowers with violet petals. Luis Carlos Gurken, who has collected and grown this neoregelia, writes that it is very sensitive to drought and can only be grown successfully, if given plenty of moisture and in a bright, humid environment.

Reprinted with acknowledgement to:
Journal of the Bromeliad Society International, Vol. XXI, No3, May-June 1981.

*'Garden of Friendship'*

*When I feel a bit lonely or just a bit low*
*To lighten my spirits out gardening I go*
*It's a garden of friendship each plant that I tend*
*Reminds me of someone and each one a friend*
*When I gaze on the beauty, friend's faces I see*
*And I think of the plants they have given me.*
*The bulbs and the seedlings, the cuttings and all*
*If it wasn't for friends I'd have no flowers at all*
*In my garden of friendship, midst colour and scent*
*My friends are all with me and I am content.*

## Report from Study Group II by Trish Kelly

We have met twice recently discussing many aspects of seed raising, plant propagation and identification.

Members of the group have been set the task of raising, for comparative study purposes, seed from examples of *Aechmea*, *Vriesea*, *Werauhia* and *Neoregelia.* This seed has been obtained from various sources for this incredibly interesting experience. As you can imagine it is a "first off" time for many of the members and challenging but encouraging when after many weeks, particularly in Winter, to see these little green seedlings sprouting. We will of course go through the long process of growing them on, continuing to learn as we compare the progress of each grower's plants in the search for more knowledge in this method of propagation.

We have also had demonstrated the removal of seven pups from one of the member's Vrieseas and one pup given to each member, again for comparative growth study.

At our last meeting we were introduced to the botanical identification of species. As a study exercise we are growing and examining the "Procerum Group" of the Blue Complex within the Genus *Nidularium*. In Australia there are many *Nidularium* species with questionable names and the only correct way to identify the plant is to dissect the floral parts at anthesis. In addition to the dissection, all sections of the plant are to be examined completely, including the numbers of leaves, their length and width, the inflorescence, floral and scape bracts as well as analysis of the flower head down to the ovaries.

It is with the expertise of Don Beard and Ross that this exercise was so clearly demonstrated to us and we thank them very much for an extremely interesting session.

Ross and Don will undoubtedly be conferring with other recognised authorities on the final identification of this *Nidularium*, sharing photographs of each section with detailed description of the plant's features along with much discussion.

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By way of interest if any of the members or other readers of our FNCBSG Newsletter have any spare blue flowered *Nidularium* pups or plants which may fit the "Complex" we would be delighted to have them to study.

We encourage other members of the Far North Coast Bromeliad Study Group to form a similar study group to expand your knowledge and interest in the amazing plants of the Bromeliaceae.

## **Bromeliad Root Rot and Heart** (Crown) **Rot** by Peter Paroz

Bromeliads are not subject to many pests and diseases, but heart rot and root rot can cause considerable losses. These two conditions can be caused by the same organism *Phytophthora cinnamomii* depending on the origin of the attack. This organism is a fungus with swimming spores which thrive in oxygen deficient conditions. The spores have a long time resting stage at 12 - 15 yrs !!. It is highly invasive, particularly when some form of mechanical damage has occurred. The mode of dispersal is not known but contaminated surface water is a possibility and rain water is suspected.

The organism is widely spread in soils where it has caused appreciable losses in avocado plantations attacking the roots. It is also reported as a problem in durian, oak and cacao trees and numerous ornamental shrubs and is a problem in Queensland pineapple fields. The organism gets it's specific name from the cinnamon tree and was identified as the cause of substantial losses in cinnamon tree plantations in Java about 1915.

The pineapple industry has developed a simple 'baiting' test for detecting *Phytophthora* in soil, potting mixture or water. The procedure depends on the ready attack by the organism on the basal white tissue at the base of a bromeliad leaf. The original test used leaves from a pineapple top, but any young bromeliad leaf with white tissue is satisfactory.

Fill a glass jar to about 10 cm with the water to be tested and place the test leaf in the water so that about 2.5 cm of the leaf is submerged, use a thin skewer to pin the leaf at the required depth. Allow to incubate for 8 to 10 days. *Phytophthora* is indicated by attack on the white tissue usually with a blue/black line and a foul smell. A less invasive organism *Pythium* is indicated by a cotton wool-like growth around the leaf.

For soil or potting mix, boil and cool some water. Place 3 or 4 teaspoons of the soil or mixture in the bottom of the glass jar and gently pour in the boiled and cooled water and set the leaf as above.

The recommended fungicide for the local pineapple industry is Ridomil (Fongarid), Aliette® is a recommendation from the www. Another local recommendation is Phosforpine which is a phosphorous acid preparation neutralised to pH 5.7. This compound appears to act by inhibiting germination of the spores.

Bromeliad plants which are infested can sometimes be saved if the invasion is not too advanced. The best procedure is to remove as much of the affected tissue as possible back to white tissue. Treat with fungicide and allow the damaged tissue to dry and callous over. A serviceable fungicide for this purpose can be made from two parts slaked lime (calcium hydroxide not agricultural lime) and one part sulphur.

The recent heart rot problems that I am aware of seem to be associated with the use of chemical sprays; one for mosquitoes and the other for scale control. A possible reason is that the chemical was too strong and caused damage to the growing point of the plant and allowed invasion by the fungus.

A bacterium, *Erwinia sp.,* has also caused a soft crown rot in pineapples. A possible source of this organism is contaminated surface water used in preparation of liquid fertilizer solutions.

Reprinted from: ***Bromeliaceae***
Journal of the Bromeliad Society of Queensland Inc., No.35, Sept/Oct. 2002.

## ***Puya laxa*** by Gary Webber

A very strange and different plant as far as bromeliads go and quaintly beautiful in my opinion. The plant is medium sized 30 - 45 cm high and more in spread. From the thick central woody stem come woody branches, similar to a *Dyckia*, but which are very stiff and thick, instead of being flexible. The charm of the plant is the white fuzz (trichomes) all over the daub olive green of the plant, giving it the appearance of being covered in long fuzzy velvet. Stiff, upright, hooked brown spines march down the top edges of each 'leaf' branch of the plant. The plant takes on an unruly, twisted, contorted appearance, unlike the more ordered appearance of Dyckias.

Once having been taken by the appearance of the plant, it eventually amazes us by throwing a very long, multi-branched flower spike, up to 2 mtrs long, with five side branches each up to 70 cm long. The monstrosity tends to bend and meander across the ground or other plants, instead of being upright. I assume that where this plant grows, being so arid, ants are probably the best pollinators, so the flower stems crawl across the ground for their benefit and being so long, allow seed dispersal away from competing with the mother plant. Up to 50 flowers on each branch of the inflorescence appear over a long time as each branch continues to grow in length. These are dark, steely-grey tubes from a pink and green base capsule. A great plant for a hot, dry place in full sun which likes a feed and a spacious pot, being a terrestrial.

Reprinted from:
The Hunter District Bromeliad Society's Newsletter, March 1997.

*Tillandsia neglecta*
1st Open -- Laurie Mountford

*Billbergia sanderiana*
1st Novice -- Jeanette Henwood

*Guzmania* 'Lantra Star'
Judges Choice -- David Lewis-Hughes

*Neoregelia lilliputiana*

*Neoregelia* 'Hot Embers'
shown by Shane Weston

*Dyckia* 'Naked Lady'
A spineless plant which rarely flowers.

*Billbergia* ‘Helen of Troy’

Two billbergias very different to each other, both out of the *Bill.* ‘Helen of Troy’ grex by John Catlan, JG 80572, seed sewn on 12 - 2 - 2008.

*Bill.* ‘Trojan Tiger’ as mother.
X
*Bill.* ‘Hallelujah’ as father.

(seed parent should always precede the pollen parent in a hybrid formula, mum x dad)

*Billbergia nutans*
ex Selby Gardens

Came to Australia via Harry Luther.

Who actually imported it is unknown.

*Vriesea* ‘Mariae’ tucked into the fork of a tree and tied for added stability.

*Vriesea vagans* tucked into palm frond pockets.

Photo’s supplied by: Ross Little and Derek Butcher

## Step by Step Removing Pups off a Foliage Vriesea by Ross Little

A good sturdy knife or saw is required such as a hole saw.

Pups in upper leaf axils are easily accessed if the lower leaves are removed.

For difficult to remove leaves, split and pull to either side to expose the pups.

Ease the pup away from the axis of the plant to expose the hinge point.

Cut downward and slightly in toward the base of the parent plant.

A clean cut, this should be allowed to dry/callous over now before potting.

## What You Should Know About Billbergias by Don Beadle

It may well be that the *Billbergia* was appreciated by the ancient South American civilizations before recorded history. But they did not leave evidence of their appreciation the way the early 19th century Europeans did in their many marvellous horticultural journals, gazettes and magazines. That was the age of great collectors and great collections, the *Billbergia* was introduced to Europe in 1815 where it charmed and intrigued the horticultural community. Hand-coloured drawings of these early imports dramatically illustrate this interest.

There are now over 60 described species with about 30 distinctive varieties. The native range for the *Billbergia* is primarily eastern Brazil in the lower elevations, but several species are found in Peru, Ecuador, Venezuela and as far north as central Mexico.

Billbergias resemble Aechmeas in form and habit and in fact differ taxonomically in small ways such as structural details of the pollen grains and whether or not sepal tip is 'prickly' (the *Billbergia* is not). In habitat, the *Billbergia* is usually epiphytic in clumps, preferring airy locations with bright shade or indirect light. In captivity, the *Billbergia* is often individually imprisoned in heavy, wet soil, in dank, dismal, deep shady locations.

Glowing descriptions of the beauty of the *Billbergia* bloom inevitably and the deflating phrase, "unfortunately, the bloom is short lived, lasting no more than two weeks". This, coupled with the outrageous allegations, "Billbergias are the easiest to propagate and grow of all bromeliads", has done much to disillusion, discourage and deter the grower from an adventure with the *Billbergia*.

The *Billbergia* has much to offer the grower today. A variety of sizes allow the growing of 7cm tall, stoloniferous rosettes and 1 + metre clumps of *Billbergia rosea* or *Billbergia stenopetala.* The thin tubular shape of the helicoid *Billbergia* allows enjoyment of the colour, form and spectacular bloom without the sacrifice of growing area. The efforts of hybridisers has resulted in the availability of new, hardy and constantly colourful cultivars to which the bloom is merely an embellishment.

**Culture**
The *Billbergia* prefers to be grown in a porous open, mix with good drainage. Since the majority of growers custom design their own concoction no specific recommendation is made here. I use the commercial PROMIX because of it's convenience and availability. Billbergias do not universally develop large, strong root systems and the PROMIX packs well enough to support the tall plants when they become top heavy when watered. I grow many of them high overhead in the shade house and have never become adjusted to having them diving down on me when I fill them with water.

Pot shape and size seem to be more a matter of aesthetics then anything else,

particularly in judged bromeliad shows. I become embarrassed when I behold a single small *Billbergia* alone and forlorn in the centre of a huge, unattractive plastic pot. Please do not do this. Most tubular Billbergias suffer from a lack of conventional shape when displayed as single plants. They are naturally gregarious and seem to prefer clumping and community life and are best shown competitively as neat clumps. When left to choose their own arrangements, they unfortunately seldom conform to our ideas of what orderly should be. The attractive arrangement of a clump requires the grower to remove the old mother plants when they begin to lose their glamour. Gaps need to be filled in by removing young offsets and replanting them in a more appropriate spot. Pruning should be merciless in order to keep a loose, open clump that will allow free access to air and light. An unattended clump will soon pack the pot with green, scaly, skinny things that will do little towards encouraging the grower to acquire more Billbergias. The spectacle of a well grown, hanging pot of colourful Billbergias in full bloom is a rewarding and spiritually uplifting sight.

Watering is another subjective matter. Most growers schedule their watering by the clock and calendar, mystical signs, weather conditions, their general emotional state etc. I recommend a dispassionate approach based on whether the *Billbergia* is wet or dry. My only problems have occurred from excess in one direction or the other. Billbergias do not seem to be overly sensitive to watering and I will confess to leaning toward too little rather than too much. The imposition of a degree of stress into the everyday life of the *Billbergia* seems to produce a hardier, more compact, colourful, well formed plant. This desirable condition is more easily attained when the *Billbergia* is kept on a strict diet.

No single factor contributes more to the unattractiveness of a *Billbergia* than does overfeeding. Balance in Billbergias is the key word. If you grow healthy plants in locations where they get good light for long periods with lots of moving air, you may feed them well and reap all the benefits there from. If you grow them in low light in stagnant conditions, then feeding is a shameful cruel process and you should look within and seek council.

My soil-less PROMIX provides only small initial doses of trace elements that are quickly used up. Peters Peat Lite mixes contain a balanced basic mixture of nutrients together with the needed three elements. I usually mix Peters to a concentration of well under a 1/4 of a teaspoon per five litres, which is continuously added to my water a marvellous little proportioning device. I do not know if this is the proper amount but it has apparently done no harm.

A summary of ideal growing conditions for Billbergias would be to grow them in open elevated, airy locations with good light for long periods, with moderate amounts of good water and with a MINIMUM of fertilizer. Most Billbergias will survive from just above freezing to over 45º Celsius. *Billbergia sanderiana* and most of it's hybrids surprised me by ignoring -8º Celsius for 30 hours. The large helicoides begin to expire or to be seriously damaged in the range 5-9º Celsius.

They are surprisingly tender. The best temperature range for colour and conformation seems to be cool, to 10º Celsius at night with a balmy 20-23º Celsius day. I thrive under these conditions myself, but if they exist in south Texas it's for only one or two days in the spring and fall and that's all. We are all dealt conditions that are probably not ideal for the variety of plants we try to grow and I have found the *Billbergia* willing to adapt to a wide range of conditions. I've seen them grown well in Illinois basements, New York apartment windows, hill tops in California, under the trees of Florida, anywhere at all in Australia and even in the unrelenting winds of Corpus Christi. But this cannot happen by ignoring the particular needs of the plant. I note that the people who grow show quality Neoregelias and Vrieseas invariably grow show quality Billbergias. The reciprocal is true also. The key must be caring.

Billbergias are a little more obliging at breeding time than are some other bromeliads. The appropriate parts are readily accessible and the process is well known. I have, however, set seed only about 15% of the times I've attempted to make a hybrid. That cold fact, to me, fails to validate that bit of frivolous folklore that suggests how easy it is to propagate the *Billbergia*. The *Billbergia* frequently fails to bloom also. When a *Neoregelia* fails in this fashion, it becomes famous. I heartily recommend hanging pots to permit the use of otherwise unused space above the rest of your plants and allow maximum exposure to free air and light. Almost any pot can be adapted to hang with a modicum of ingenuity and will add much to the appearance of your growing area. The spectacle of sunlight through the leaves is an added pleasure not available when your *Billbergia* lies under a bench. Today's grower, when beginning a *Billbergia* collection, is presented with a dizzying array of desirable Billbergias from which to choose. In the past, only old standard, garden varieties were available. The packed pots of *Billbergia nutans, Bill. pyramidalis* and a token helicoids or two usually define the *Billbergia* for the average grower. A modern collection could begin with the Richter's *Bill.* 'Fascinator', Carrone's *Bill.* 'Pink Champagne', Thorn's and Schwart's *Bill.* 'Strawberry', *Bill.* 'Manda's Othello', Beadle's *Bill.* 'Caramba' and *Bill.* 'Hallalujah'. The spectacular bloom of *Bill. pyramidalis* is best displayed in the marginated cultivar *Bill.* 'Kyoto'. For the foliar colour in species *Billbergia*, try *Bill. amoena var, viridis* or *Bill. amoena var. rubra.* Interesting form with attractive spines is available with *Bill. horrida* and *Bill. sanderiana.*

## Try them. You'll like them.

Reprinted from: **The Bromeliadvisory**
Bromeliad Society of South Florida, February 1998, Vol. 41 No.2

**From the BSI, Inc. Glossary:**

**helicoid** -- Watch spring; referring to certain billbergias that have slightly recoiled petals.

## Planting in Trees by Andrew Steens

One of the more appealing features of bromeliads is their ability to be grown in trees. This adds an extra dimension to your garden. In stead of just growing small plants at ground level, with larger shrubs and trees as a backdrop, now you can have the trunks and branches festooned with colourful bromeliads. There are some misconceptions that need to be cleared up first.

1. Bromeliads are not parasites, they do not feed off the host plant.

2. Most trees will cope quite well with bromeliads lodged in them. It is rare for the host tree to rot or become otherwise damaged by the bromeliad clump.

3. Not all bromeliads are epiphytes. Some, such as *Puya* and *Dyckia* are terrestrials. Although they can be grown in trees, they will usually struggle.

The first step is to look for good planting spots in your trees. These may include the forks of evergreen trees such as:
Avocado (*Persea*), *Banksia, Citrus, Macadamia,* Puka (*Metyta, Griselina*).
These all have a tendency to produce a number of low, angled branches from the same point, forming nice rest areas to place the bromeliad clump.

Tree ferns are ideal. All types can be used. The woolly, fibrous trunk types such as *Dicksonia fibrosa* are great for Guzmanias, Tillandsias and Vrieseas, which can be planted into the fibre. Clumping types, such as *Dicksonia fibrosa,* form natural nesting areas in the clumps that bromeliads can be placed on. Hard trunk species, such as the common black tree fern (*Cyathea medullaris*) can be used to grow bromeliads they spread via stolons, for example *Canistropsis billbergioides* and *Neoregelia ampullacea.*

Some palms are great for planting with bromeliads. Large *Phoenix reclinata canariensis* form handy pockets that can be used to grow many different types. *Butia capitata* also forms pockets made by trimming old leaves. *Trachycarpus fortunei,* very hardy, has a fibrous trunk similar to *Dicksonia fibrosa,* which can be used for small bromeliads. As this palm provides less shade than a Dicksonia small, highly coloured *Neoregelia* species could be used such as 'Fireball' and 'Hojo Rojo'.

The next step is to work out which kinds of bromeliads to use. This is mainly dependent on the amount of light available and the "look" wanted. Splashes of winter colour in shady areas are easily achieved using *Canistropsis* or winter coloured *Aechmea*. Colour in high light areas can be developed with clumps of *Neoregelia*. For dramatic seasonal splashes of colour dripping from the trees, try clumps of *Billbergia*.

Attaching and caring for the plants is as easy as falling off a log!
Just follow these steps:

- Plant in spring or autumn when conditions are most favourable to root growth and it isn't too cold or too sunny for the plants to cope.

- Clumping plants such as *Neoregelia carolinae,* should be placed near their final position as these wont move much.
  Stoloniferous plants (those which spread by short woody stems) such as many *Billbergia,* some *Canistropsis*, *Neoregelia* and *Vriesea* species should be planted lower in the tree, they can then climb the trunk or branch as they grow.

- In fibrous trunks, just open a hole and place the base of the plant in. It can be secured if necessary with plastic coated wire or pantyhose, wrapped around the trunk at the level of the hole.

- In palm pockets, just wedge the plant in the pocket with the base of the plant or root system in contact with the leaf mould that is in the pocket.

- On hard trunks or tree forks, wrap the root system with sphagnum moss, binding it with plastic coated wire. Then use the wire to attach the clump to the fork or trunk.

- For types that form little or no roots, such as some Tillandsias, a glue such as Liquid Nails can be used to attach the plant to the trunk.

**Note That --** Trees that have bark that peels off should not be used as the bromeliad will come away from the bark. Instead, you could mount the bromeliads on driftwood and suspend them from the tree on nylon fishing line or alternatively hang old cane baskets planted with bromeliads from the branches.

**Note That --** If wire is used to secure bromeliads, remove it once the plants have attached themselves, or at least after one year. Otherwise, the host plant will be strangled !

Once you have planted your aerial garden, sit back and enjoy !

*Tillandsia fasciculata* and *Canistropsis billbergioides* are most valuable plants to use in tree mounting. *Till. fasciculata* is sun tolerant and hardy forming a dense clump and flowers well. *Can. billbergioides* is more sensitive needing shade but very attractive when grown low in the fork of a tree. *Vr. splendens* is another plant which, when placed high in a tree, shows it's beautiful foliage to perfection.

Reprinted from: **Bromeliad**
Journal of the Bromeliad Society of New Zealand, January 2001, Vol. 4, No.1

## Novice Popular Vote

| | | |
|---|---|---|
| 1st | Jeanette Henwood | *Billbergia sanderiana* |
| 2nd | Coral McAteer | *Neoregelia* 'Fallan' |
| 3rd | Trish Kelly | *Aechmea* unknown |

## Open Popular Vote

| | | |
|---|---|---|
| 1st | Laurie Mountford | *Tillandsia neglecta* |
| 2nd | David Lewis-Hughes | *Guzmania* 'Lantra Star' |
| 3rd | Shane Weston | *Neoregelia* 'Heat Wave' |

## Judge's Choice

| | | |
|---|---|---|
| 1st | David Lewis-Hughes | *Guzmania* 'Lantra Star' |
| Hon. Mention | Shane Weston | *Neoregelia* 'Heat Wave' |

## Comments from the growers:

Laurie's large clump of *Till. neglecta* was probably purchased from the Bromeliad Society of Australia (BSA) around 1993. He can't remember the clump's original size at purchase but it now measures 60cm long x 40cm across, as a singularly connected clump it is quite impressive. It has just progressed naturally having been watered with everything else in the garden with little or no fertilizer.
Dave's *Guz*. 'Lantra Star' was grown under 70% shade cloth.
Shane purchased his *Neo*. 'Heat Wave' some time ago from the Olive Branch.
Jeanette's *Bill. sanderiana* grew under 75% shade cloth and kept close to the top of the shade house to gain maximum light exposure. It is a reliable bloomer, but unfortunately doesn't pup much.
The *Neo*. 'Fallan' of Coral's grew from a single tiny pup. It grows in the back yard under plenty of sun.
Trish's *Ae*. hybrid was another of her lucky raffle wins.

**From the BSI Inc. Glossary:**

**grex --** A group of species or hybrids; applied collectively to the offspring of a given cross from one seed pod; literally a flock or swarm.

**anthesis --** The flowering period; the time when the flower is fully open, usually the time of anther maturity when the pollen is ripe.