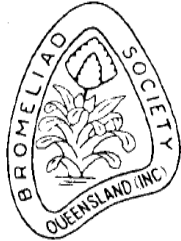


Bromeliaceae



VOLUME XL - No. 6 - NOVEMBER/DECEMBER 2006



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Authors are responsible for the accuracy of the information in their articles.

Front Cover: *Orthophytum* 'Starlights'

Photo by Ross Stenhouse

Rear Cover: *Canistrum triangulare* (species)

Photo by Ross Stenhouse

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NOTICE OF THE 2007 ANNUAL GENERAL MEETING

Members are hereby notified that the Annual General Meeting of the Bromeliad Society of Queensland (Inc.) will be held on Thursday 15th February, 2007 commencing at 8 pm in the Uniting Church Hall, 52 Merthyr Road, New Farm.

Business to be conducted will be: The President's Report, Election of Society Officers, Election of the Management Committee, and the Election of the Auditor. Nomination forms for the positions are available upon request from the Secretary. Nominations must reach the Secretary by 5pm 1st February, 2007. In the event of insufficient nominations being received for each vacancy, nominations will be called for at the General Meeting.

Glen Bernoth, Secretary

***Vriesea* 'Plantation Pride'**

by JEAN BURSTROM

Editorial Comment (Ross Stenhouse): Reprinted with permission of Bromeliad Society International from the J. Brom. Soc. 25 (6): 226-7. 1975. The article below was brought to our attention by Derek Butcher when he saw that we had published an image of 'Vr. Plantation Pride' in the last issue of this journal (see XL-5. Pg. 10). This article gives the background to the development of this hybrid.

The hybrid *Vriesea* 'Plantation Pride' is a result of quite a few years of study, steady hybridizing, work, and waiting. Each morning finds Bob with his bromeliads, and by breakfast time he usually has put in a good three hours. His favourite bromeliads for hybridizing are members of the Tillandsioideae family, but he really can't pass up anything which has ripe pollen. When Ervin Wurthmann calls from Tampa, he usually greets me with, "What has Dr. Weirdo been up to today?"

Vriesea 'Plantation Pride' is a cross of *Vriesea schwackeana* and the beautiful hybrid *Vriesea* 'Van Ackeri.' From the beginning, this plant showed great vigour and was the most robust seedling in the family flat. At the time of the second transplanting Bob put it into a special pot so that he "could keep an eye on it." Sure enough, it bloomed a year earlier than its siblings-spring of 1974.

This is a regal bromeliad-large and stately, with good conformation. The plant grew to about 30 inches high, and the diameter of the dark green mottled foliage was also about 30 inches. The tall branched inflorescence is, when young, a brilliant lemon

yellow, which, as it matures, graciously blends into a beautiful shade which is almost a burnished gold. The inflorescence had nine slightly inflated branches. The flowers are yellow.

Two more outstanding bromeliads from the same cross bloomed this spring. The first, Bob has named *Vriesea* 'Plantation Pride' var. 'Forever Amber'; the second, *Vriesea* 'Plantation Pride' var. 'Southern Belle'.

Vriesea 'Plantation Pride' var. 'Forever Amber' is a medium-sized plant-about 14 inches tall. The inflorescence nestles close to the foliage, and the inflorescence has glossy amber branches, which are nicely inflated and tend to curve in slightly.

Vriesea 'Plantation Pride' var. 'Southern Belle' is also a medium-sized bromeliad. The inflorescence has five bright russet orange branches which are inflated, broader and shorter than 'Forever Amber'.

In hybridizing Bob feels that only the best results should be kept. The rest of the seedlings should be destroyed for the good of everyone concerned with bromeliads. In

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Bob's experience, he has had only one out of sixty seedlings that he feels is worthy of continued propagation and only one out of perhaps hundreds that is worthy of registration.

Vriesea 'Plantation Pride' has turned out to be a real winner. For the present, it is the star of our bromeliad family, but we're looking forward to more of Bob's crosses to bloom.

***Neoregelia* 'The Rose'
now 'Lokelani'**
by Derek Butcher

Beware your sins will find you out even though it may take 12 years! Recently I received an email from Lisa Vinzant in Hawaii advising that the plant we are growing in Australia as 'The Rose' is really 'Lokelani'. The problem stems from Shane Zaghini's book 'Bromeliads – A Guide to the beautiful *Neoregelia*' 1994 page 11 where a plant was given the name 'The Rose' and origin unknown. The Cultivar Registrar, Don Beadle, accepted this information as being fact.

In 1994 at the World Bromeliad Conference, Bob Okazaki donated a 'Lokelani' for the special auction and ever since then the plant has been known by this name in the USA. It would appear that someone from Australia visiting Bob just before 1994 brought an offset back to Australia with the thought that this plant was being called 'A Rose' which is what the Hawaiian 'Loke' means. This intrigues me a bit because the Rose is not native to Hawaii!

So if you are growing 'The Rose' I suggest you change the name to 'Lokelani'.

If there is a moral to this story it is to register your own hybrids yourself and not wait for others to try to clean up your mess at a later date.

Experience It
(by Jimmy L. Antle)

Editorial comment (Bob Reilly) This is part of an article that appeared in the Journal of the Bromeliad Society, March-April 1987, v. XXXVII (2), pp 51-55. The section of the article printed here deals with hybridizing neoregelias.

For those who have been thinking about setting seed on a species, or making hybrids, may I offer these ideas?

- Some species will not set seed using their own pollen. Bring in pollen from another plant of the same species for this purpose.

- Some plants like *Neoregelia* 'Oh No' and 'Sunset' self-pollinate and should be suspect when used in attempting a hybrid. When making a cross and you notice more seed pods maturing than those you pollinated, be suspicious that selfing has occurred. If, on the other hand, only the ovaries that you pollinated swell, then relax and wait for the seeds.

- Learn to be very careful with plant names because you will want to be sure that your plants are correctly identified.

- Have a plan: something you want to create and not just the product of two plants that happen to be in bloom.

This is how I make a *neoregelia* cross and I encourage you to try:

- When the selected plants are mature, isolate them. At seven o' clock in the morning, and before the bloom opens, use needle nose tweezers to pull away the petals of the plant designated to receive the pollen (in order to expose the pistil and anthers). Using the tweezers, pull away and discard each pollen-bearing anther surrounding the pistil. Even though pollen on these anthers is damp

and not viable, you should still be careful not to let them touch the stigma.

- At eleven o'clock, remove an anther from the open flower of the pollen parent and take it to the anther-bare seed pod parent stigma. I always try to increase the exposure time to the pollen by positioning the anther so that it stays attached to the pistil.

- Now make a plastic identification tag about 1,5 mm x 3 mm x 25 mm, and log either a code number for the cross, or enter the name of the pollen parent and date. Place this plastic sliver between the broken-off petal and the sepals. Make sure that the sliver has blunt ends to prevent damage to the ovary.

- Keep the plant isolated from insects for the rest of the day. When the torn bloom closes at the end of the day, it will hold the tiny tag.

- Once this is done, it is a waiting game for three months. You may wish to set up a seed nursery during this period (see below).

- At the end of three months, check the ovary for fullness. Sometimes you can see through the skin to the dark seeds inside. Gently lean the seed pod to one side to observe this. When you think the seed pod is ready, gently tug on the pod and if it is ready, the stem end will pull free easily.

- Prepare a small jar of water containing a few drops of a mild detergent. Squeeze the ovary from the pointed end so that the seeds drop into the solution, cover the jar, and shake it vigorously to remove the membrane material. Drain some water from the jar, then pour the remaining water and seeds onto a clean paper towel. Allow the seeds to dry briefly.

- Next, put a layer of damp peat moss about 25 to 40 mm deep in a clear plastic shoe box (Editorial note: A chinese food container also works well.) Do not let the moss get soggy. Take the seed from the paper towel and place them in a small container such as

a dry jar along with the stimulant Rootone (that also contains a fungicide) and shake vigorously so that each seed gets covered with powder. Then spread the seeds on the damp peat moss. Put an identification tag in the box, put a clear plastic cover on the box and place this nursery under a fluorescent light, or in a bright location. Temperatures of 28 to 30 degrees Celsius give good germination. Neoregelia seed will usually show the first (seedling) leaves at 10-15 days.

- Leave the container closed so as not to introduce fungus. I allow my germinated seeds to stay in the container until the leaves reach the top. (Approximately 10 to 12.5 cm). Then I remove the top for 5 to 7 days to allow fresh air to harden them off so that I can place them in a community flat. In these flats I use a mix of 60% peat moss, 30% perlite, and 10% Baccto, a humusy, commercial mix. To this mix, I add a weak solution of water-soluble fertilizer such as Peters 20-20-20.

- Keep the seedlings in a bright, calm area and mist them daily until they develop enough leaf reservoir capacity to hold water and nutrients. Use a small amount of fertiliser for foliar feeding (0.5 tsp. Peters 20-20-20 per 4.5 litres of water). This program should give you good leaf growth. When the seedlings have sufficient water-holding capacity, they may be potted separately and the nitrogen "number" (in the fertiliser specification) decreased, allowing the plant to harden off further and to develop its individual characteristics. More and brighter light can be given.

- The next consideration will be to pick which one, two, or three plants from the many available, will represent to the public the cross you have made and matured. It can be a trying, but rewarding, time. Society will let you know how well you have done.

The Editors Desk

by Ross Stenhouse

At the October meeting of the society, the point was emphasised by Arno King during his presentation about the importance of ensuring that we collect species as well as the hybrids. It is necessary to ensure that species do not become 'lost' due to one or other of them becoming unfashionable and ceasing to be present in people's collections of bromeliads.

Arno listed quite a number of species that once were commonly collected, but nowadays are rarely seen. Arno's point was that in the wild, many species are extinct or virtually extinct and that now they only survive in collections. He felt that if we are not careful, a species could become completely extinct in collections as well and the best way to help prevent this was to popularise the collection of species within member's (and others) collections.

In this issue we have tried to 'Do Our Bit' by featuring a number of species in the images within the issue. The images are clearly labelled as species in the accompanying label.

Apart from simply ensuring the survival of various species, the importance of species is that they contain the gene pool used to produce various cultivars and hybrids.

The species *Neoregelia nivea* shown on p. 28 has a deal of significance because

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it is one of the very few species *Neoregelias* that contains white naturally and thus most of the *Neoregelias* that contain white in their leaves contain genes from this species in their genetic make-up. If we were to lose this species then we would be without one of the basic species used in producing the great hybrid *Neoregelias* that we so commonly see.

How can you help? The best solution is to ensure that you grow a number of species in your collections.

Finally, I would like to thank those of you who have helped in some way to the publishing of this journal. It takes a big effort by many to get an edition together ready for printing. Of critical importance is those who supply articles for publication, so to them a particularly heart felt thanks!

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Bromeliad books available at State Library

by Leanne Day

The Bromeliad Society of Queensland, Inc. has recently donated a comprehensive collection of beautiful new bromeliad books to the State Library of Queensland where they are now available to all Queenslanders.

Many of these glossy books are heavily laden with lush colour photographs and the information covers all aspects of growing and identifying the many bromeliad species and cultivars. The books held in the State Reference Library collection at the new State Library, Cultural Centre, Stanley Place, South Bank, are available for browsing by clients. If you are unable to visit the State Library, and require particular information about bromeliads, the State Library offers a free service where staff search for information on your behalf and post, email, fax or phone it to you.

For those who prefer to borrow books, whether you live in Brisbane or elsewhere in Queensland, you may do this through your local public library. Because the Bromeliad Society has generously donated several copies of many of the donated titles, State Library, through its Public Library Services, is able to loan copies of these books to several regional libraries at a time, where they are available for the public to loan. If you don't find any books from this donated collection, you may ask your public library to place a free inter-library loan request with the State Library for you.

Thank you to the Bromeliad Society of Queensland for donating this beautiful selec-

tion of bromeliad books to the State Library of Queensland for everyone to enjoy:

- Book of Bromeliads and Hawaiian Tropical Flowers by Ronald W. Parkhurst
- Bromeliaceae: Profile of an Adaptive Radiation by David H. Benzing
- Bromeliad Glossary – 2nd edn by Pamela Koide
- Bromeliads by Francisco Oliva-Esteve
- Bromeliads in the Brazilian Wilderness by Elton M. C. Leme
- Bromelie – Sonderheft 3 & 5 by Renate Ehlers
- Canistropsis: Bromeliads of the Atlantic Forest by Elton M. C. Leme
- Growing Bromeliads - A Guide to the Growing of Bromeliads
- Jewels of the Jungle: Bromeliaceae of Ecuador – Part 1 Bromelioideae by José M. Manzanares
- Jewels of the Jungle: Bromeliaceae of Ecuador – Part II Pitcairnioideae by José M. Manzanares
- Margaret Mee's Amazon: Dairies of an Artist Explorer by Margaret Mee
- New Tillandsia Handbook by Hideo Shimizu & Hiroyuki Takizawa
- Nidularium: Bromeliads of the Atlantic Forest by Elton M. C. Leme
- Bromeliads for the Contemporary Garden by Andrew Steens
- Growing Bromeliads (3rd edn) by the Bromeliad Society of Australia
- Bromeliads: a Cultural Manual by the Bromeliad Society International, Inc.
- The Red-Flowered Tillandsias from Brazil by Renate Ehlers
- The Tillandsia Tectorum Complex by Lieselotte Hromadnik

(See photo of presentation page 10)

BSQ Seed Bank

Don't forget that the Society has established a seed bank under the stewardship of Doug Parkinson. It's early days for the bank, however it is up and working.

As can be seen, the seed available included some great plants. We are sure as members start to use the seed bank to a greater extent, the list of species available will grow. A page will be set up on the society internet site and this will be kept up to date.

If you have some spare seed, please give it to our seed bank,

Doug may be contacted at 51-53 Analie St, Ningi, 4511 or ph. (07) 5497 5220 or email Doug at seedbank@westnet.com.au

Seed available includes the following

<i>Tillandsia</i>	<i>schiedeana</i> white flower
	<i>Juncea</i> white flower
	<i>juncea</i> silver form
	<i>butzii</i>
	<i>ultriculata excusa</i>
	<i>gardneri</i>
	<i>fasciculata florida</i>
	<i>elongata</i>
	<i>capitata rubra</i>
	<i>festucoides</i>
	<i>bryoides</i>
	<i>capitata</i> 'Old Gold'
	<i>capitata rubra</i>
	<i>pruinosa</i>
	<i>jalisco-monticola</i>
	<i>tricolor</i>
<i>Neoregelia</i>	<i>pascoaliana</i>
<i>Alcantarea</i>	<i>extensia</i>
<i>Gusmania</i>	<i>sanguinea</i> 'Costa Rica'
	<i>monostachia</i> 'Red'
<i>Aechmea</i>	<i>chantiaii</i>
<i>Puya</i>	<i>mirabilis</i>
<i>Catopsis</i>	<i>floribunda</i>

Here's a Hint

(by Bea Hansen)

Reprinted, with permission of the New Zealand Bromeliad Society, from the Bulletin, November 1979, p.8.

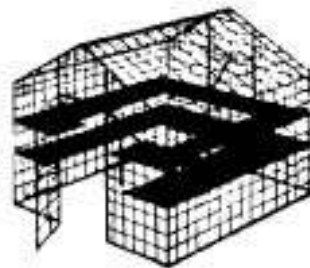
This tip was passed on to me from Australia and now I pass it on to you. I think it originally came from America. It is a most unique way of growing tillandsia seed.

A pair of pantyhose was filled with sphagnum moss and completely covered with tillandsia seed.. It was hanging in a greenhouse. The person who saw it has recently tried one leg of pantyhose and found it worked wonders. It was fairly easy to keep the moss wet and that, in turn, gave the seed enough moisture. The seed clings to the nylon with no problem at all.

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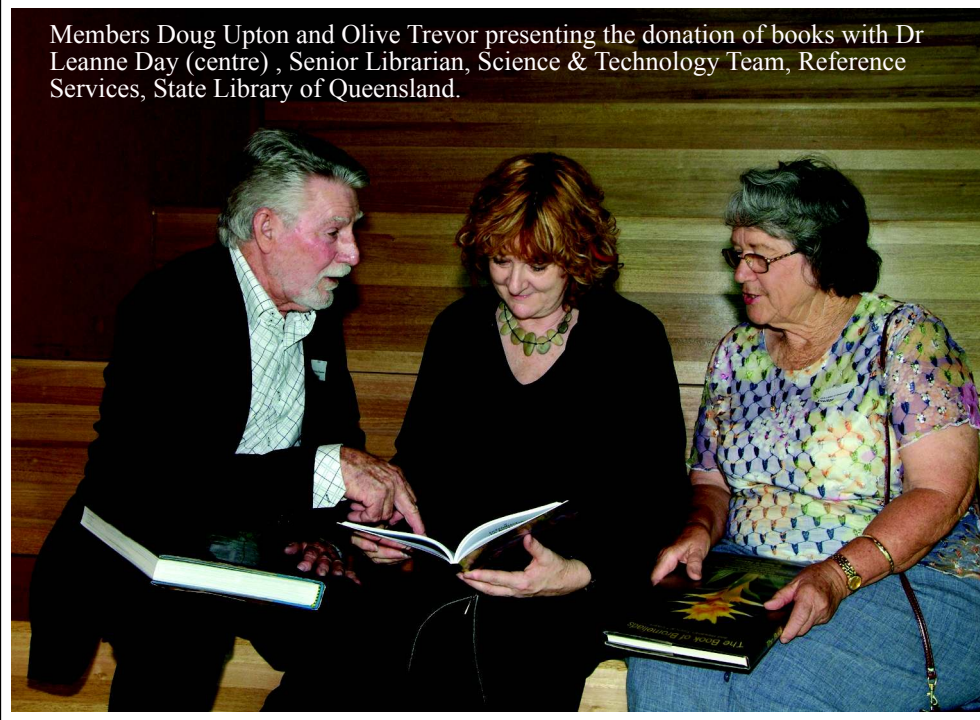
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Members Doug Upton and Olive Trevor presenting the donation of books with Dr Leanne Day (centre), Senior Librarian, Science & Technology Team, Reference Services, State Library of Queensland.



***Deuterocohnia
brevispicata***
by Derek Butcher

It all started when Lieselotte Hromadnik and her husband collected a plant near Chuquisaca at 1300m in Bolivia some 20 years ago. Lieselotte is known more for her Tillandsia collecting in the highlands of Bolivia and Peru but she had an interest in the pricklies too! This particular specimen was grown on at the Heidelberg Botanic Garden in Germany under the watchful eye of Werner Rauh. It flowered in captivity and was named *Deuterocohnia brevispicata* by Lieselotte and Werner jointly in 1988 in what is lovingly called Trop. Subtrop. Pflanz. I duly translated the description from German to English for my own records and there it stayed, just in case it may come in useful in the future.

In 2002, on one of the many trips that Len Colgan from Adelaide made to Germany to visit Renate Ehlers to increase his Tillandsia collection, he was able to visit Heidelberg Botanic Gardens and even acquired rare Tillandsia from there too. He must have really impressed them because shortly after he was sent seed which had previously been stored in a frozen state to increase their longevity of viability. One of the batches was called *Deuterocohnia brevispicata*. We don't know much about freezing seed although we do know that in this case Timm Stolten had frozen the seed as an experiment in a regular freezer at -18C for nearly two years before sending some to Len. Non-frozen seed from this species are viable after 12 months so we did not learn much! However, we do know that the seed came from the type specimen where the same flower spike has flowered 3 times a year regularly for the last 18 years!

On receipt of the seed out came my records so we knew what the plant should

look like but I was not going to wax lyrical because it was only seed we had. As is usual with generous Len, he spread the seed around growers in Australia (and Adelaide). We had little success but there were rumours that John Catlan and Genny Vauhkonen had succeeded but were they according to the name on the packet? We are growing seedlings from John but they are exceedingly slow. I had heard rumours that one of these plants was producing a long long flower spike and no sign of it flowering. So it was great to get photos in the Sept/Oct 2006 issue of Bromlink – The Goldcoast Group Newsletter – of the plant in flower.

I contacted the owner of the plant, Lyn Hall who supplied me with coloured photos. So here is the next part of the story. John Catlan got the seed in 2002 and, Ian and Lyn bought a small seedling in Oct 2004 because they wanted something different for their cactus and succulent rockery. Less than 2 years later it was in flower. We know that in every seed batch there are always one or two plants that grow much faster than the rest – was this one of them? Or is it just the fabled Queensland weather plus fertiliser? Lyn tells me no fertiliser and sandy soil so the only other option is that the plant likes free root room. Outside plantings are great but you must have plans to weed from time to time! Anyway, Lyn did not expect such a flowering phenomenon. Remember that the description said flowering to 1.2m and here the inflorescence was up to 2m long and bending towards the ground. With the aid of ropes and a nearby tree the flower stem was kept fairly erect. The flowering habit is odd to say the least although the name 'brevispicata' gives a hint but 'strobilata' may have been more descriptive. Brevispicate means short spike which does not refer to the generally-called flower spike but to the short side branches. Strobilate means like a pine-cone and here you have a



scape some 50cm long emerging before the first red 'pinecone' appears and every 10cm or so a new red 'pinecone' stretching to over 2metres if you live on the Gold Coast.

Eventually from these 2.5 cm diam 'pinecones' flowers emerge where the petals form a bicoloured tube which is predominantly red but with a clear bright green tip. A colour combination only nature could think up!

Please remember not to remove the flower head because it will just flower again, again and again. The Germans want to know what magical climate you have on the Gold Coast because it takes them 10 years from seed to flowering. I have told them the secret is 'hot air' caused by bragging!!

I am told that John and Genny at Jacob's Well have 'hundreds' of these plants if you are interested in something different by way of prickles. But remember if you do come from down south in Australia you will have to wait a bit longer for flowering.

Bromeliads in Australia

(by Chas Hodgson)

Editorial comment (Bob Reilly): Reprinted, with permission of the Bromeliad Society International, from the Bromeliad Society Bulletin, March-April 1951, v. 1 (2), pp.14-16. The author was one of Australia's bromeliad pioneers. In this article, he describes the very limited range of bromeliads available in Australia then. He also makes the point that Queensland's climate makes the state very suitable for growing bromeliads. The accuracy of this observation is demonstrated by the extent to which bromeliads are grown today.

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 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 private wealthy growers, who, in some cases, had large heated glasshouses, 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 that have been introduced here. It has been, truly, a matter of 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* var. *discolor*, *Nidularium innocentii* var. *striatum*, *Nidularium amazonicum*, *Pitcairnia maidifolia*, and 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 brome-



liad 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 Fuschia*” 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 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 muster up the plants that were scattered about the country.

My first objective was the Melbourne Botanic Gardens. In their large hothouses were the familiar five, but here and there among other foliage plants were strangers such as *Aechmea fulgens* that was in bloom with its glorious long-lasting flower spike. There were two different *Billbergias* under the one label of *Billbergia 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 more airy conditions 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 gardener, I secured *Aechmea fulgens*, *Tillandsia lindenii*, *Billbergia zebrina* and *B. vittata*. Next day, I visited the gardens again, to comb over the outdoor bromeliads. There I saw *Ochagavia lindleyana*, *Pitcairnia spp.* *Puya alpestris*, *Dyckia rarifolia*, *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 (The author lived in Melbourne).

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 Institution’s Annual Report in which there was an article by Mulford B. Foster. I said to myself that I would write to 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 leaves; *Quesnelia liboniana*, and nice plants of *Nidularium innocentii* var. *striatum*, and *Neoregelia tristis*.

Out of doors, he had *Puya dasylirioides*, *Pitcairnia tabuliformis*, and *Ochagavia spp.* 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. This is fatal to some plants because of the lime (salt) content.

The Gardens in Adelaide had been very



much neglected for sometime. 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* and *Neoregelias* had survived. The Gardens are now under a curator who had 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 that I will 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 favourable 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 to me that they have growing there: *Tillandsia lindenii*, an unnamed *Puya*, *Billbergia nutans* (that will over a large area of ground if not checked), several unidentified *Billbergias*, and one or two *Aechmeas*. We have agreed upon a favourable exchange of bromeliads.

I have sent 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 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 30 or 40 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 led me to possess, now, about 40 species of broms as well as having created considerable interest in them in 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.

18th World Bromeliad Conference

The 18th World Bromeliad conference will be held in Cairns in mid/late June 2008.

The address for the web site containing the latest information on the conference is:

<http://www.BromeliadsDownUnder.com>

Annual Subscriptions

Membership fees (\$15 - Single, \$20 - Family, \$30 Overseas) are due and payable on 1st January 2007. Prompt payment will greatly assist the treasurer and Membership Secretary. Members who have not paid their annual subscription will not receive further copies of Bromeliaceae after the January-February edition



Neoregelia ampullacea

Variants

(by Geoff Lawn)

Editorial comment (Bob Reilly): Reprinted, with permission of the Bromeliad Society International, from the Journal of the Bromeliad Society, September-October 1992, v. 42 (5), pp 195-196. Neoregelia ampullacea and the hybrids made from it are some of the most popular miniature Neoregelias. In this article, Geoff Lawn, from Western Australia, outlines some of the more popular types, and clarifies some of the confusion surrounding the correct naming of these plants. Note that there have been some minor cultivar name changes since this article was written, but it is still substantially correct.

Some bromeliad species such as *Neoregelia ampullacea* show considerable variation. Over forty distinct forms are known in cultivation. By current botanical classification, none is different enough to warrant variety status, but many have cultivar names. Culture and climate affect their appearance but, under fairly uniform growing conditions, the subtle differences become apparent amongst the following loosely grouped plants.

“Tigrina types” The true *Neoregelia* ‘Tigrina’ has relatively narrow stripes, pure white flowers, and stolons up to 25 cm in length. It is unlike any known *Neoregelia ampullacea*. At least twenty different kinds of “Tigrina types” are cultivated, ranging from tiny tubes 2 cm tall by 1 cm in diameter to a large form 20-25 cm tall with 10 cm stolons.

Characteristic are the mid-brown to reddish cross bands on the reverse of the leaves and less regular banding on the 5-8 green, upper leaf blades. Often the cross banding is intermingled profusely with

speckles or minute spots, particularly on the obverse. Foliage base colour varies too from scurfed, mossy grey-green to bright, lettuce green. In this category, the lower half of the tight rosette is comparatively narrow, flaring more at the top, usually with cusped or rounded leaf tips.

The “variegata” form with yellowish green leaf margins is a tigrina type along with ‘Freckles’, ‘Midget’, ‘Zebrina’ (upright 15 cm tube with wide, maroon stripes). Others in this group are:

- ‘Pixie’, a *N. ampullacea* cultivar similar to ‘Zebrina’, has strong purplish-red zebra-like cross bands and pointed leaf tips.
- ‘Purpurea’, heavily striped burgundy at the rosette base and reverse.
- ‘Black Beauty’, an intraspecific cross of *N. ampullacea* x *N. ‘Tigrina’*, with the entire foliage liberally splotched and banded sepia red when grown in bright light.

“Punctatissima types” Again, a misleading term because the true *Neoregelia punctatissima* has white, sericeous, transverse spots, pure white flowers, and is a species “...known with certainty from the type collection alone, doubtfully in cultivation..” (Smith & Downs, Bromelioideae, p.1562) (Now known by the cultivar name ‘Punctate’)

Prominent characteristics of about a dozen different varieties are a fuller, more open rosette 10-20 cm across with 8-15 lustrous leaves, appearing greenish yellow in strong light, even bright gold in the tropics, and a series of punctuated brown or red cross bands that are more pronounced in the reverse. The actual width, spacing, and number of these hieroglyphs distinguishes one form from another. The ‘Rubra’ form has coppery bronze foliage with darker, brick red markings.

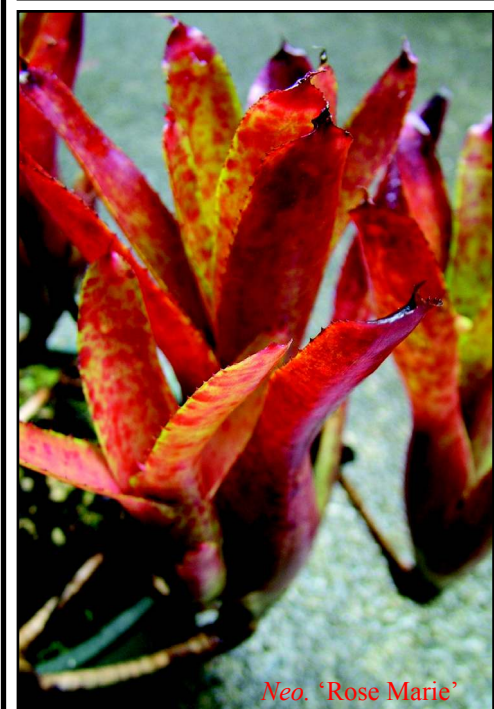
Amongst both “tigrina” and “punctatissima” types, petal colour ranges from pale lavender to deepest violet on the blade



Neo. "Punctate"



Guz. 'Lemans'



Neo. 'Rose Marie'



Neo. 'Lokelani'



Vr. 'Sunset' (Kents)

margins, the central portion being whitish.

Within the species *Neoregelia ampullacea* there is 'Purple', a plain green, compact, full rosette with a rosy, purple-flushed centre. *N. lilliputiana* is a closely allied dwarf of the genus at 2-3 cm in height and 1 cm across. It may not be botanically distinct from *N. ampullacea*.

Other *Neoregelia ampullacea* cultivars include: 'Empressa', 'Grand Duchess', 'Marie?', 'Minnie Mouse', 'Nitritis', 'Princess', 'Regalia', 'Speckles', and 'Spreckle'.

These miniatures are invariably hardy, attractive and prolific, often filling a pot, bowl, mobile, or hanging basket in a few seasons. Their climbing or cascading growth habit is an arresting sight when allowed to ball or mass into 100-tube colonies. Many *Neoregelia ampullacea* hybrids abound, often retaining that robustness and strikingly barred foliage. They are ideal for collectors

What Plant is That?

by Ross Stenhouse

Recently the International Cultivar Register, Derek Butcher received the image (bottom left opposite) with the following question from Peter Waters in New Zealand:

"Do you know there is another *Neoregelia* 'Rose Marie' besides the two in your list. It seems to be an Olens hybrid and is only found in Australia. Quite common in Queensland. Obviously not registered but a bit confusing."

Derek forwarded it to me for publication in Bromeliaceae in this section of the journal as he thought someone may be able to help out with an identity for the plant.

In the last edition there was a "What Plant is That" section and a number of suggestions were received about what the plant's

correct identification is.

(1) *Ae.* 'Gaiters'

(2) *Ae. cylindrata* or maybe *Ae.* 'Blue Cones' and *Vriesea* 'Sunset' (Kents), a cultivar of *cylindrata*

(3) *Ae.* 'Mary Brett'

(4) no suggestions

Error Correction

In edition XL-5 we made a mistake in the labelling of one of the illustrative images. We called a *Vriesea* 'Sunset' on Page 18, a *Vriesea* 'Highway Beauty'

Did You Know?

That there are the two genera of bromeliads known to include carnivorous species (*Brocchinia* and *Catopsis*). Both genera include species which produce tubular, brightly coloured leaf rosettes which are adapted to attracting, trapping and digesting insects and other small animals.

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It's a Plant!

by Lynn Hudson

I have known David Liddle for 30 years, I knew he was 'into' plants but I did not know he had a quarantine house until 2 years ago. He lives just outside Mareeba, north of Cairns. The climate is drier and more like California so we decided we should quarantine our imports with him. So began a new learning curve for the three of us.

As we unpacked our treasures I held up a plant and said, "Isn't this a beauty?" David looked my treasure up and down and said, "It's a plant. It has roots to hold it down and feed it and leaves for photosynthesis". Well, slap me in the face with a dead fish – I was mortified! I continued to unpack, but very quietly! He had finally shut me up; it only took him nearly 30 years! However he did like my beautiful plants as later he brought his good friend Gary, to purchase some bromeliads and even steered him toward some real beauties.

David's comment stuck in my mind and over the next weeks when I looked at a plant heard those words over and over again. It made me think differently. Suddenly they were not only my 'beauties' – they demanded that I observe them as functional identities and treat them in a manner that would allow them to function correctly and reach their full potential. So I returned to basics – to "roots, shoots and leaves"!

Roots provide the bromeliad with stability to keep it upright for photosynthesis. For most *Tillandsias* this is the main function of roots whereas *Cryptanthus*, *Dyckias*, *Guzmanias*, *Orthophytums*, *Vrieseas* and intergeneric combinations of these genera rely heavily on their roots for food. Usually working roots are white and fluffy and

go brown as they age. Some are like wire; they are very strong and can cut your hands. Strangely some of these can rupture the hard shell and again produce working fluffy roots and provide food for the plant. If a bromeliad is repotted or transplanted it will grow new roots for stability – just as it would need to do if it is disturbed in habitat.

Plants that have formed a long stem from leaf removal can be cut off anywhere along the stem, repotted and they will usually produce new roots. The plant usually alters its growing habit after such repotting, so many growers simply cut off most of the roots and repot in a deeper or larger pot to get a healthier plant.

Shoots or 'pups' have evolved to suit their habitat environment. Some bromeliads produce offsets on the inside of the leaf at the axis of the stem, where the leaf holds liquid nutrients to succour the new immature plant – eg *Guzmanias* and *Vrieseas*.

The stoloniferous bromeliads send out a strong runner that forms roots which attach to the ground, tree trunk or to whatever is in the pathway but they will avoid treated timber. Their offshoots form on the end of these stolons. By moving away from the parent plant these offshoots gain access to nutrients and have space to develop to maturity – eg most *aechmeas*, *Billbergia pyramidalis* and *Neoregelia compacta*. This stoloniferous habit is why *aechmea* offsets climb out and attach to the outside of our pots – they are just doing what comes naturally, treating the pot as a tree trunk.

Some bromeliads produce just one offset, usually from the centre of the parent plant. To balance this the parent gives large quantities of seed – eg *Vriesea splendens* and most *Werauhia*. Bromeliads that produce an offshoot amid the top leaves are called "upper puppers". This can happen for no apparent reason or if the plant is damaged. These are

not popular with growers as to remove the offshoot, the leaves around the offshoot need to be removed. If the plant is well shaped, the aesthetic appearance of the plant can be destroyed. *Nidularium* and *Canistropsis* can also be upper puppers but as the offshoots are on stolons leaf removal, if necessary, is minimal.

Leaves are shaped to channel water and nutrients to the plant, even very narrow rounded *Tillandsia* leaves are channelled. The main function of leaves is photosynthesis to feed the plant, to produce fruits and propagate. The green colouring in leaves is chlorophyll, necessary for photosynthesis. Leaf thicknesses, shapes, colours and markings have evolved to work with the sun in photosynthesis and depict the best growing area for each plant. (See 'Bromeliad Cultivation Notes' page 27 & 28.) Leaves have several microscopic helpers for respiration – stoma, scurf and trichomes.

Stomata on the leaf tops are like the pores on our skin and open to absorb fluid nutrients.

Scurf is a white powdery looking substance we can see on the leaves. It is actually small hairs that hold nutrients and moisture for the plant. Scurf can appear as strips, stripes, zigzags or spots. It rubs off easily but will reform.

Trichomes are also hairs that give the plant a fluffy appearance, they too are for absorption and in arid areas they hold nutrients until the plant respire in the cool of the night – eg *Tillandsia tectorum*.

Any adverse change in the leaves can show us the plant has some problem – eg if the tip goes brown, the plant is usually too dry. If colour fades from the tips there could be an unwelcome foreign object in the throat. Yellowing patches that turn paper-like tell us the leaf is getting too much sun.

Barbs or thorns – why do bromeliads

have these? I do not know. Maybe it is because otherwise they would be utterly perfect. On the majority of plants they do not deter the animals from eating them! When some dogs decide the bromeliad has what they want, the plant will be massacred! Vicks Vaporub is a good deterrent – put a small dab on the offending dog's nose (not nice, a bit warm) then some on the pots or on a few sticks near your bromeliad patch.

How are bromeliads different from other plants? Firstly bromeliad leaves have respiration features on top, whereas most plants have devices on the underside. Most plants grow from the centre but their centres are not hollow. Remember the bromeliad leaf is the plant, damage the leaves and your plant is permanently marred.

"It's a Plant" – sure, but bromeliads are very beautiful clever functional identities and behind the third one you purchase is a Bromeliad Bug. Once you get a good nip you will enter a fascinating world and the more you learn, the more you realize you know nuthin'. Just a plant indeed!

Vriesea rubyae (by Bob Reilly)

Vriesea rubyae is a Brazilian species. It is a small plant, forming an erect rosette approximately 15 cm high and wide. The grey-green leaves have purple bases and tips. It has a semi-pendent, sword-shaped, 10 cm long, orange-red, inflorescence. A photograph appears on p. 24.

The plant will form a small clump quite quickly. The pups form on the end of thick, 10 cm long stolons, so the plant may be useful for growing on logs and stumps in well shaded situations, although I grow mine in a pot.





Nid. innocentii 'Nana'



Nidularium rutilans (species)





Neo. 'Orange Crush'



Neo. 'Rosella'





Bromeliad Growers of Australia

by Nigel Thomson

This group was formed recently to further promote bromeliads to the Australian public.

The group consists of commercial growers, medium and small collector-growers ranging from Far North Queensland to Northern New South Wales. The intention is to promote bromeliads to the Bromeliad enthusiast, keen gardeners and the general public who know absolutely nothing about Bromeliads and get them "hooked on Broms" like the rest of us crazy Bromoholics!!!

Most of the group consists of growers who are members of various Brom Societies and wish to further promote Broms outside the societies by having shows and sales throughout the year to encourage new enthusiasts into Brom Ranks.

The intention is not to compete with the society shows at all but to work alongside them which will ultimately benefit all concerned in the "Brom World"

The group has imported and is importing new varieties into Australia from Holland, Belgium, Germany, USA, South America, New Zealand and South Africa. Our aim is to continue to introduce new hybrids and species into Australian collections at competitive prices to swell the ranks of Bromeliad enthusiasts country wide.

2008 World Bromeliad Conference

This event will be held in Cairns in 2008. It will be a great conference and it is the first time it has been held outside of the United States of America.

Early bird registration forms are now available at the Society's monthly meetings or by contacting Roy Pugh (phone 07 3263 5057, email: rbpugh@netspace.net.au -- please put World Bromeliad Conference 2008 in the subject "box" on your email, mail: 60 Binowee St Aspley Qld 4034)

Society Membership

(by Bob Reilly)

Some interesting facts about our membership are:

- Our records show that as at 15 September 2006, we have 297 memberships and 390 members.
- Over 90% of the members who have joined in 2006 came from locations outside of Brisbane. Many mentioned that they were joining to receive Bromeliaceae.
- Within regional Queensland, membership "hotspot" areas include: Maryborough/Hervey Bay, and Gladstone/Tannum Sands.
- As well as overseas members, we have members in every Australian state except South Australia. We also have members in the Northern Territory.
- We exchange journals with over 60 societies. Over 40 of these are non-bromeliad plant societies, many of which are Queensland orchid societies.

Ipswich and District Bromeliad Society

A bromeliad society operated in the Ipswich area for many years. Recently, it has been "reactivated". Please contact Carmel Cullen (phone 07 3201 6524) if you would like further information.

Society Projects

(by Bob Reilly)

A range of bromeliad books has recently been donated to the State Library of Queensland, by the Society. The books can be borrowed by people throughout Queensland through their local public library. Leanne Day (who is one of our members), from the State Library of Queensland, has written an article for Bromeliaceae, published in this issue, on the procedures involved and related matters.

Separately, the Society is negotiating with the State Library of Queensland with a view to having a display of bromeliads, in the new State Library, in early 2007. This will be just prior to our Autumn 2007 show and plant sale at Mt Coot-tha.

Ross Stenhouse and Bob Reilly have finished preparing the Society's book on growing bromeliads titled: Starting with Bromeliads. It has been reviewed by the Society's Management Committee and should be printed in October 2006. A free copy will be sent to each Society membership. (Hence, family memberships will receive only one copy). Additional copies will be able to be purchased for \$18 plus postage. They will be on sale at the Bromeliad Bonanza on 11/12 November at Mount Coot-tha Botanical Gardens. (We had hoped to sell them for \$15 plus postage, but increases in estimated printing costs have prevented us from achieving this outcome).

New Queensland bromeliad societies continue to form! \$500 has been donated to the "reactivated" Ipswich & Districts Bromeliad Society as well as the Glasshouse Country Bromeliad Society. \$500 has also been donated to the organiser (Cairns Bromeliad Society) of the Bromeliad XIII conference

that will be held in Port Macquarie in 2007.

More kindred societies (namely, those with whom we exchange journals) continue to be "enrolled"! Recent ones include: Greenpark Garden Club, Aspley Garden Club, Bundaberg Orchid Society, The Toowoomba Orchid Society, and the Brisbane Palm & Cycad Society.

Bromeliad Society of Queensland's Christmas Party 2006

Our Christmas Party was enjoyed by almost 100 members on Thursday 7th December.

The food was really lovely and I am sure all had plenty to eat. It would have been their own fault if not. We had a giant raffle and it certainly caused a lot of entertainment especially when the table the Aizelwoods were sitting at won a plant.

Some members have said since it was one of the best they have been to.

We had some lovely songs sung by Laura Dilling who was accompanied on the guitar by her big sister Megan. The last song was a Xmas carol and we all joined in to sing along with her. Thank you, girls. Well done! Thanks to David and Evelyn Rees also Nancy Kickbusch for the help they gave Jim and I setting up. Next year it can only be better for our Society as we have had some new members who are keen to hop in and help to share the work which is great. Happy and Healthy New Year to all. Beryl Batchelor

January Meeting of the Society

The first meeting for the year is on Thursday, the 18th January 2007. It is being held at the usual venue in New Farm.

Some *Neoregelias*

(by Bob Reilly)

Neoregelias are some of the most popular bromeliads. In recent years, many articles have appeared in Bromeliaceae on growing *Neoregelias*, so I will not repeat the advice on how to grow them. In this article, fifteen *Neoregelias* are described. Photographs of many of them appear throughout this edition.

'Break of Day' About twenty, 4 cm wide, bronze/green leaves, form a flat rosette approximately 30 cm across. At flowering, the leaves near the plant's centre are a mixture of cream, green and red, irregular banding.

'Break of Day' is a hybrid of 'Maid of Honour' X Unknown.

***carolinae* var. *tricolor* 'Perfecta'** Perhaps the best of the *carolinae* var. *tricolor* cultivars. About twenty, 5 cm wide, leaves form a flat rosette up to 60 cm across. The green leaves, which have central cream stripes of varying widths, have a pinkish hue in good light. At flowering, the plant's centre turns bright red. A photograph appears on p. 29.

'Decora' Over twenty, 5 cm wide, leaves form a flat rosette approximately forty cm across. The green leaves have central cream stripes of varying widths. At flowering, the plant's centre turns bright red. 'Decora' is a hybrid of 'Plutonius' X *princeps*.

'Lokelani' About twenty, 5 cm wide, leaves form a flat rosette approximately 30 cm across. The bronze leaves have cream/green spots and markings. At flowering, the plant's centre turns red, providing a strong contrast with the cream/green markings.

'Lila' About twenty, 5 cm wide, green leaves form a flat rosette approximately 40 cm across. At flowering, the plant's centre turns an iridescent pink-purple. A photograph appears on p. 26.

'Marble Snow' About twenty, 4 cm wide, leaves, form a semi-erect rosette approximately 30 cm across. The leaves are a mixture of cream, green and pink.

'Marble Snow' is a hybrid of 'Marble Throat' X 'Perfecta Tricolor'.

'Meyendorffii' x 'Polka Dot' About twenty, 4 cm wide, bronze leaves form a flat rosette approximately 30 cm across. At flowering, the plant's inner leaves turn bright red.

nivea About twenty, 4 cm wide pale green leaves form a 40 cm wide semi-erect rosette. At flowering, the plant's centre turns white. The plant's pups form on the end of 20 cm long stolons, enabling a clump of these plants to "climb" over small logs and stones. A photograph appears on p. 28..

'Orange Crush' About twenty, 4 cm wide, leaves form a flat rosette approximately 50 cm across. The bronze leaves have central, cream stripes of varying widths. At flowering, the plant's centre turns a bright orange-red, with the remainder of the plant flushing a lighter orange-red.

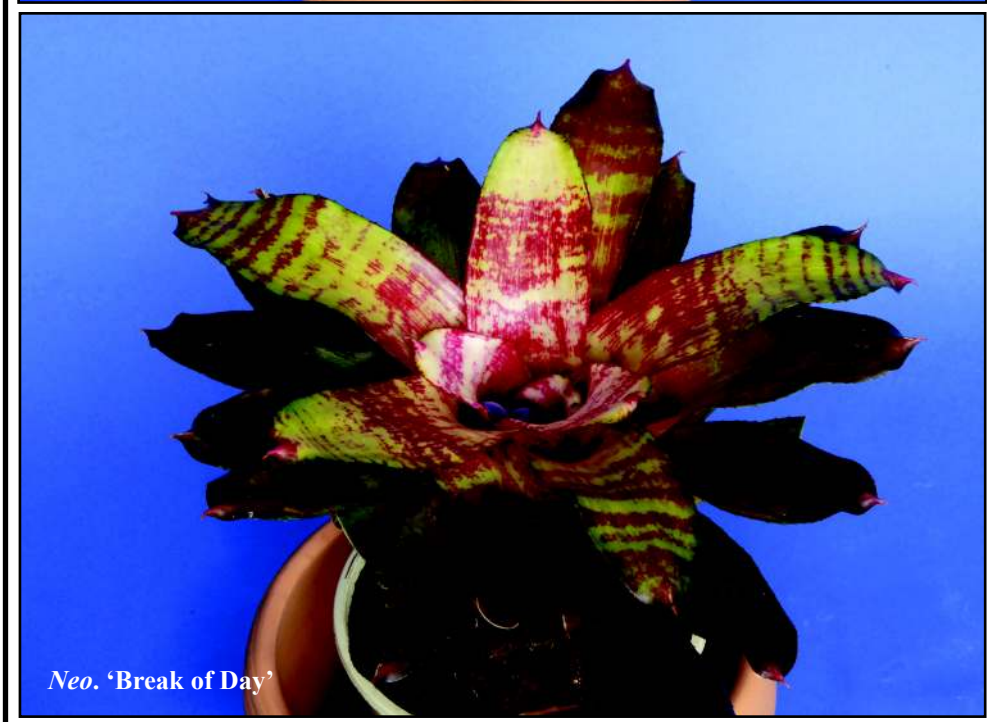
'Orange Crush' is a cv. of unknown *carolinae* hybrid origin. A photograph appears on p. 26.

'Pink Floss' (unreg.) About twenty, 6 cm wide, leaves form a flat rosette approximately 40 cm across. The leaves are yellow-green, with faint pink purple spotting and narrow banding. At flowering, the plant's centre flushes a bright pink-purple. A photograph appears on p. 35.

'Princess Di' About twenty, 5 cm wide, leaves form a flat rosette approximately 40 cm across. The green leaves have brown-red markings and spots. At flowering, the plant's inner leaves turn red.

'Princess Di' is a hybrid of *concentrica* x Unknown.

'Rosea Striata' x *spectabilis* About twenty, 8 cm wide, leaves form a flat, open



rosette approximately 60 cm across. The green leaves have numerous pink-red thin stripes. At flowering, the plant's centre turns pink-red. A photograph appears on p. 37.

'**Rosella**' About twenty, 3 cm wide, bronze-red leaves, form a flat rosette approximately 30 cm across. At flowering, the plant's inner leaves turn red, providing a strong contrast with the cream markings and bandings.

'Rosella' is a cv. of unknown parentage. A photograph appears on p. 27.

'**Tangerine**' About fifteen, 5 cm wide, leaves form a flat rosette approximately 40 cm across. At flowering, the plant's centre turns bright red, with the balance of the leaves having a bronze-green colouration. A photograph appears on p. 26.

'**Treasure Chest**' About twenty, 5 cm wide, leaves form a flat rosette approximately 40 cm across. At flowering, the leaves are red with green spots.

Bromeliad Tissue Culture Laboratory comes to Queensland

Author:- Ross Stenhouse

With encouragement and support from 'Business Migration Unit' of Queensland Govt., the business, Plant Biotech Pty. Ltd decided to move to Coolool, Queensland. The business is run by Anil Ghodke, a plant bio-technologist.

Anil started a small commercial tissue culture laboratory back in New Zealand about two years ago, and started working primarily on Bromeliads. He has worked on lots of ornamental plants before, but this was his first attempt with bromeliads, and he soon realized that these plants are not as easy to tissue culture.

It took Anil nearly two years of persistent research and experimenting to successfully micropropagate a reasonable number of bromeliad varieties. It also took him that much time to build up the propagated stock. When his varieties started multiplying, Anil slowly started to trial-market the produce.

The main market for the company's products was Australia. About six months back Anil and his business partner Paul decided to shift their small laboratory to Australia about six months ago to take advantage of the various varieties and hybrids available in Australia.

So with a good number of existing varieties in culture, the company is now ready to market the products worldwide. Their plants don't have any quarantine restrictions, so the prospective market is global. Recently their laboratory has been accredited by AQIS (Australian Quarantine and Inspection Service) adding impetus to their marketing.

Currently they are in the process of developing a web site. However, since Anil's expertise is in tissue culture technology and not growing bromeliads, they sought help from the society in the provision of images of mature bromeliads for inclusion on the web site.

Currently the companies plant list includes the following: *Alcantarea imperialis Rubra*, *Aechmea fasciata*, *Aechmea fosteriana*, *Aechmea lueddemanniana* var. *rubra*, *Aechmea spectabilis*. *Alcantarea geniculata*, *Alcantarea nahoumii*, *Bromelia balansae*, *Canistropsis billbergioides* 'Citron', *Canistrum lindenbergii*, *Guzmania berteroniana*, *Guzmania* 'Decora', *Hohenbergia cattingae*, *Neoregelia ampullacea*, *Neoregelia carolinae* 'Tricolor', *Neoregelia* 'Purple Star', *Puya alpestris*, *Tillandsia punctulata*, *Tillandsia utriculata*, *Vriesea altodaserrae*, *Vriesea erythrodactylon*, *Vriesea fosteriana rubra*, *Vriesea hieroglyphica*, *Vriesea platynema*



Neo. 'Treasure Chest'



Neo. 'Pink Floss' (unreg.)

variegata, *Vriesea Simplex*, *Aechmea blanchetiana* - Green, Orange and Yellow - all 3 colours, *Werauhia kupperiana*,

Tissue culture involves the mass production of true-to-type plants from carefully selected, good quality sources ('mother' plants, seeds, pups, tubers etc.) in a sterile environment, under controlled conditions of light, temperature and humidity. The plantlets (as they are referred to while in the laboratory) are grown in small plastic tubs or bottles containing an agar medium, in which hormones, nutrients and growth regulators are added in exact quantities, specific to each plant variety.

The end-result is fully rooted plantlets that can be either exported as ex-agar stage (just removed from agar media and washed thoroughly to take off any agar traces and packed immediately), or transferred into a greenhouse to be further acclimatized to growing in the soil under natural conditions, a process commonly known as hardening. As these plants are grown exponentially under near-ideal conditions, they have excellent vigour, are disease free and hardy, and can be obtained in large numbers and uniform sizes in a short period of time as compared to conventional techniques.

No doubt you may have heard some dubious reports about tissue-cultured bromeliads. Generally these problems are the result of using the culture for too long a time and Anil acknowledges that indeed there can be problems and reports that it is usually necessary to derive a new culture after a certain number of plants have been removed.

While there are the problems which have caused a certain reluctance to purchase and cultivate tissue-cultured bromeliads, there are also many positives in favour of the process. In the following paragraphs we hope to point out some of these advantages.

In some of the various articles that have

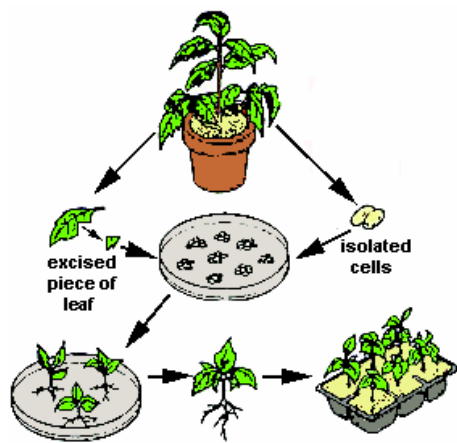
been published in the pages of this journal during the past 12 months, we have pointed out that growing hybrid bromeliads from seed may not result in plants resembling the parents. Tissue-cultured plants on the other hand are produced from a single plant, they are clones and as such should be very similar to the parent.

A big advantage is that they allow the rapid breeding up of large numbers of plants. This can be a real advantage in the case of rare species. Whilst doing a literature review for this article, a number of articles were read which reported on the use of tissue-cultured plants and the impact they are having on reducing the removal of rare bromeliads from their native habitat in South America. This is so because tissue-cultured plants provide a lower cost and ready alternative to gathering in the wild.

Vriesea gigantea and *Vriesea philippocoburgii* are two threatened species which are being intensively removed from the wild in the state of Rio Grande do Sul, in Southern Brazil. These *Vrieseas* produce seeds with low capacity of germination and the effect of the plant removals was causing real problems.

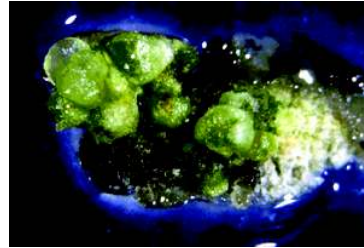
Vriesea reitzii is another threatened species in the wild. It grows in Brazilian Atlantic Forest. The Brazilian Atlantic Forest is considered a hotspot of biodiversity. It is estimated that today the remaining primary vegetation covers only 7.5% of its original area. Bromeliad species are important components of this forest.

Imagine a very large commercial grower who is cultivating tissue-cultured bromeliads and gassing the plants to flower for a large supermarket chain and you can see opportunities for inferior plants to enter the market-place and give tissue-cultured plants a bad name. The gassing of the plants has been identified as major culprit in causing a

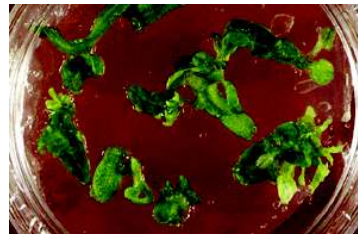


Overview of the Tissue Culture Process

Images and diagrams from <http://generalhorticulture.tamu.edu/YouthAdventureProgram/TissueCulture/TissueCulture.html>



The tissue will begin to grow. It may make a big blob of tissue called callus, or it may make new shoots directly from the explant tissue that was inserted in the container



New plantlets (shoots with leaves) are forming.



Neo 'Rosea-Striata' x spectabilis

lot of the problems with future offsets from the mothers because of the disturbance of the plant's natural biorhythms. Tissue-culture is indeed an interesting subject!

**Society Spring Show
11th-12th November
2006**

Author: Beryl Bachelor

**THEME: BROMELIADS-TREASURES
OF THE AMERICAS**

Our show once again was a huge success. I think the groups of people involved were really in the spirit and all went according to plan.

Bob Cross, once again came up with a great theme and instead of Treasures of the Americas it looked very much like "Pirates of the Caribbean". The other displays provided by The Sunshine Coast and The Gold Coast were very lovely as usual. There were certainly some beautiful and much sort-after plants in these displays.

There was also an interesting display of various *Aechmeas orlandiana*, ensign etc by the study group from Nigi

Nancy Kickbusch was her usual busy self and the plant sales area was very well organized. I think we can say, in spite of the drought the message is getting across to people how our bromeliads are now considered among the water wise group of plants plus busy gardeners are looking for colour all year with very rewarding plants.

It was lovely to see some new faces helping with the set up. There is a lot of work involved not only on the day but in the organization of a show of this calibre.

Any time members can contribute is appreciated by all but better still you get a lot of satisfaction knowing you are a part of a great club and help make it a success.

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***Tillandsia* ‘Kashkin’ revisited in 2006**

Author: Derek Butcher

In December 1993 I flowered a plant called *Tillandsia* ‘caulescent jucunda’ that I had received from Keith Golinski. That is when the fun started.

Many years ago, Michael Kashkin did some collecting in Bolivia and sold them through Fuchsialand in California. One such plant was called *Tillandsia* sp. Bolivia. This plant came to Australia via Grace Goode with this name on the label. In 1989 when Bob Whitman (of *Cryptanthus* fame) was in Australia he promised Grace he would investigate the matter and took a specimen back to the USA with him. After prompting from Grace, Bob finally told her that the plant was *T. jucunda* saying that Harry Luther had named it. Luckily Harry and I have great rapport because I told him of his mistake! He had never seen the plant concerned but agreed with my views that it appeared to be a hybrid. It certainly did not link with any Bolivian species described at that time. Dr Walter Till was also able to confirm its hybridity

After trying to contact Michael Kashkin’s widow I decided to call the plant ‘Kashkin’ in 1994.

In 1999 I became aware that *Tillandsia* International in California was selling a plant called ‘Inca Gold’ which I believe to be identical and no doubt would have come from the Fuchsialand source.

In Nov 2006 after playing with ripe apples I eventually saw a flower on a plant I got from Keith Golinski in 1995 as ‘Peru scented’. I had previously handed this plant out at the Tilly Nuts Conference in Albury with the exhortation of “Tell me when it flowers!” I had no response so I can only assume they had the same luck I had. Imagine my

surprise when I saw petals that were greyish with a tint of gold. Margaret was called in to confirm it had a scent. This just had to be *Tillandsia* ‘Kashkin’ and I checked my past records. I could find no difference.

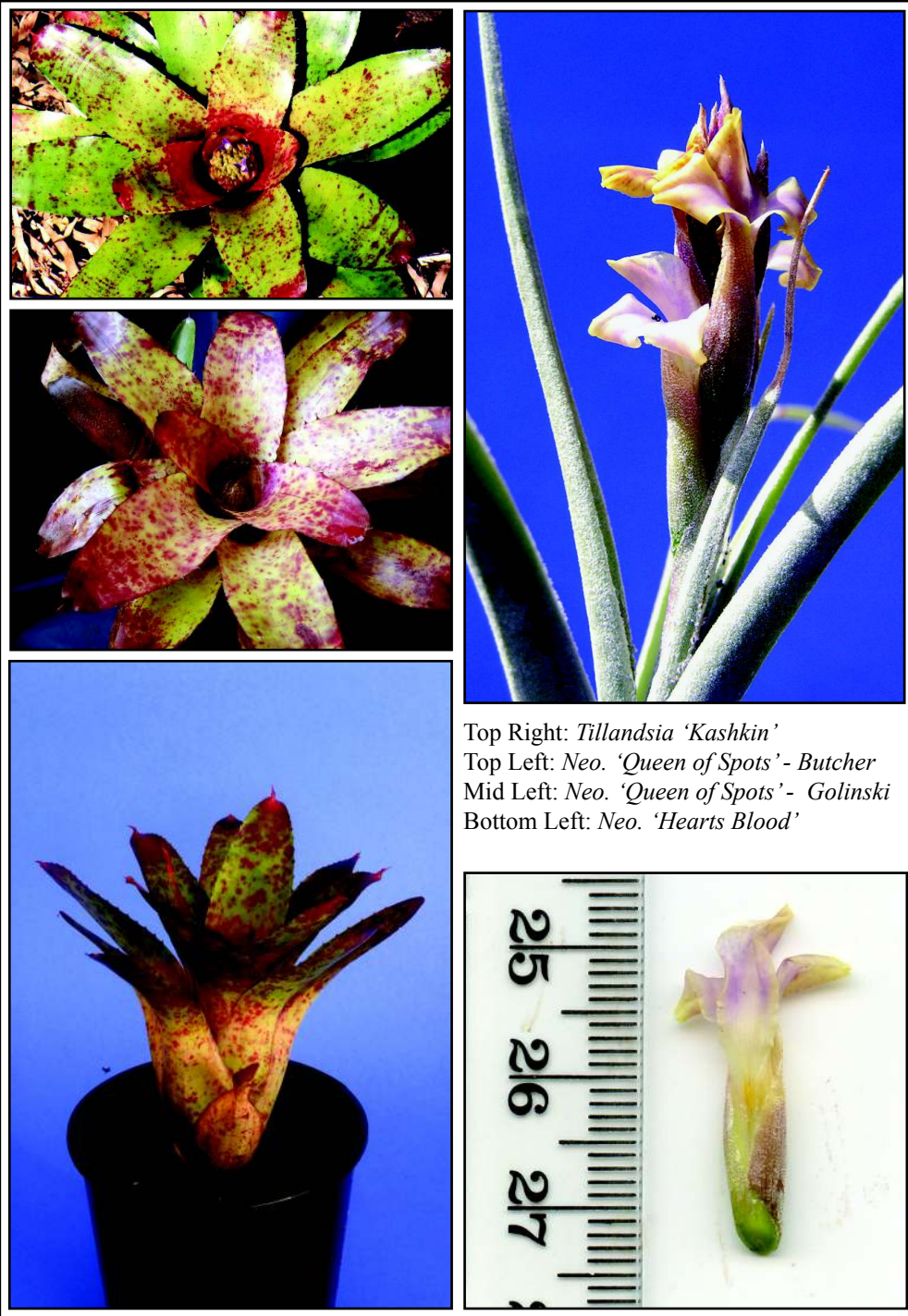
So this plant is wandering around Queensland. If you do happen to flower a plant that vegetatively looks like a *T. jucunda* but has a flower that is delightfully scented but has a colour hard to describe then change the name to ‘Kashkin’

***Neoregelia* ‘Queen of Spots’ a hybrid by Allan Freeman – parents unknown by Derek Butcher**

In 2000 we acquired a ‘Queen of Spots’ from John Catlan and I duly recorded this in the Bromeliad Cultivar Register with one of the parents being possibly *Neoregelia olens*.

All went as planned until July 2006 when Keith Golinski contacted me and said that he was growing this plant as ‘Ace of Spots’ and he had a label in Allan Freeman’s handwriting but with no parentage either. Keith Golinski’s plant from Freeman with the label ‘Queen of Spots’ which seems to me to have a flavour of *Neoregelia smithii* in it but does it? It appears that in 1988 Allan Freeman’s favorite matings included ‘Heart’s Blood’, ‘Bright Spot’ (large form), and ‘Vulcan’ and there are many from this period just circulating, some without names but some with Golinski codes so they can be traced back (if the codes were kept!)

I am asking who is growing the ‘Queen of Spots’ Butcher version, or ‘Queen of Spots’ Golinski version? I don’t really want to change the Butcher plant to ‘Ace of Spots’



Top Right: *Tillandsia* 'Kashkin'
 Top Left: *Neo.* 'Queen of Spots' - Butcher
 Mid Left: *Neo.* 'Queen of Spots' - Golinski
 Bottom Left: *Neo.* 'Hearts Blood'

quite yet until I get some feedback about how prevalent both plants are in the Brisbane area. I understand that John Higgins has a large collection of Freeman hybrids too and he may be able to give an opinion, as may John Catlan.

I think this has a Moral – somewhere.

Canistropsis seidelii
var welteri
by Derek Butcher

In the 1970's many of us were trying to grow a plant called *Nidularium seidelii* var. *welteri*, after all it seemed to grow well in Queensland and was rare! It was different to the one everybody seemed to have because the primary bracts were a dirty brown instead of being bright yellow. Why we should want to grow the dirty one is anyone's guess! *Nidularium seidelii* was in Padilla's book – 'Bromeliads' 1973 as a yellow primary bracted plant but where was the dirty brown one? The only reference was in Seidel's catalogue and over the years I have become very dubious about plants from this source. You can get some great plants from there but identity is a problem. Remember he is primarily an Orchid collector. The more Bromeliad books I got the more I read but never came across this variety. Then in 1998 I read Leme's book, *Canistropsis* – Brom Atl. Forest. 1998 and on pages 42-4 I found my answer which I now quote.

"The sub cylindrical inflorescence is the most striking feature of this species and makes it easy to distinguish from the other taxa of the genus. Morphologically, it is most closely related to *C. billbergioides*. Besides the unique inflorescence shape, other traits that distinguish *C. seidelii* include its stoutness, leaves with a broadly acute apex, very wide primary bracts which are better able to

retain water, larger flowers and much wider sepals.

As in *C. billbergioides*, there is a slight color variation in the primary bracts of *C. seidelii*, which may be greenish, reddish or yellow; the latter color predominates (see also the specimen depicted by Mee: 101.1992). A herbarium specimen with dark red primary bracts is deposited in the Barbosa Rodrigues Herbarium. This specimen was collected by Seidel (571) and contains the inscription "var. *welteri* Reitz.", but the varietal name is not valid because it was never published. Even if it had been published, it would be listed as a synonym because this color falls within the normal variation of the species."

We know that Lyman Smith treated *Nidularium billbergioides* as being very variable in the colour of the primary bracts as well as the leaves. These have been covered at Cultivar level by calling each identifiable form after the name of a fruit. We still come across additions to this list. To check this refer to the online Cultivar Register by entering 'Billbergioides' in the top box.

In this case, Elton believed the same situation applied with *Canistropsis seidelii* and all has been quiet. I did enter the name var. *welteri* as a nomen nudum in the species database on fcbs.org more as a reference in case others had this name on their label and didn't know much about it. Because of this I was able to point Jan Townsend of the Hunter District group in this direction.

There has now been an interesting development although whether it will be accepted by fellow taxonomists in a sort of peer review has yet to be decided. In the first edition of *Die Bromelie* (the German Society Journal) for 2006 I found amongst all the *Tillandsia* talk an article by Juergen Roeth on *Canistropsis seidelii* var. *welteri*. I am used to translating articles from the German for *Tillandsias* but here we had a chap who wrote



Above: *Canistropsis seidelii* var *welteri*

Photo by D Butcher

Below: *Ae. correia-araujoi* x *Canistrum seidelianum*

Photo Ross Stenhouse



in different German!! But I managed to get it translated! He did give a Latin diagnosis but it translated differently to his German diagnosis!! Confused? Well, I was but it still seems legitimate because the Latin diagnosis overrides the German one.

I call myself a quasi-taxonomist (pronounce it as you may) but here I saw what I call sloppy taxonomy work. He referred to Leme's book but not a word about the herbarium specimen of Seidel no. 571 nor did he give any reasoning why he considered Leme to be in error.

So there it is. I thought you should know because some are growing var. *welteri* as I am, but its status at varietal level is on shaky ground! We may even have to deal with it as a cultivar – now that is a 'Welter' of an idea!

The Rescue

(by Olive Rae)

Reprinted, with permission of the New Zealand Bromeliad Society, from the Bulletin, July 1979, p.5.

I live in a two-storied unit that has an open deck at the top. As I have no sheds or glasshouse, I keep a number of my bromeliads inside. I like to put these on the deck when gentle rain is falling.

Some weeks ago, I did just this, but as night closed in, heavy rain began to fall. A strong northwesterly began to blow, and by the time I was ready to retire, I decided that I must bring in my bromeliads-even if I was in my night attire.

I opened the ranchslider, and a gust of strong wind and driving rain drove me back. What to do? The broms must be rescued, so I surveyed the prospects. An idea! I opened the lower window alongside the ranchslider and pushed it open. I found by half hanging myself out I could bring them in one by one.

Who gives two hoots about a newly acquired hairdo, when one's precious plants are being savagely knocked about by the elements? I had to get newspapers and spread them on the carpet in the lounge until morning.

Even if I was a little damp I toddled off to bed happy and contented. My bromeliads were safe--mission accomplished!

Bromeliads for Garden Value

(by William Rogers)

Reprinted, with permission of the New Zealand Bromeliad Society, from the Bulletin, February 1980, p.8.

I have been assessing my bromeliads for their garden value. If I only had time and space with minimum facilities for ten plants which would I choose? I once shared a rented flat with small windows, heavy drapes, a small entrance porch and no private outside gardening space. There was a tiny, sun-baked, enclosed sun porch that we could use for nothing.

If I owned a pensioner flat with a minute back yard what could I grow? The Society can field lovely displays, but these come out of a group of young growing plants and those past their best from which we get offsets.

I always seem to need two of a kind developing, in case one isn't quite perfect. To ALWAYS have a reasonable *Vriesea hieroglyphica*, one must have a seedling coming on, as well as being prepared to dump an old plant promptly once it has flowered. In a small apartment one is committing a lot of space for such a specimen.

My list is a classical one of plants that have given me a satisfaction on an 800 square metres block for more than 10 years. There are many new ones coming that may be better.

There are also many hot house ones, worth having for novelty, that one must be prepared to lose. There are many other plants almost as good or which one could substitute. All these plants are suitable for an open, sheltered verandah, but *Billbergia brasiliensis* and *Neoregelia chlorosticta* would need more light.

V. hieroglyphica, *Aechmea fasciata*, *Ananas cosmos variegata*, *B. brasiliensis*, *B. 'Santa Barbara'*, *Nidularium fulgens*, *Neoregelia carolinae tricolor*, *Neo. spectabilis*, *Neo. chlorosticta*, and *V. schwackeana*.

Do's and Don't's Again

(by Bea Hansen)

Reprinted, with permission of the New Zealand Bromeliad Society, from the Bulletin, August 1977, p.4.

DO, if you have plants in the house, take them out and give them the treat of some gentle rain and some fresh air from time to time. They will show their appreciation.

DO remove the dead leaves from the base of your plants. If they are difficult to take off you will find they will come off quite easily if you split them down the centre.

DO watch for scale. If you remove it the minute you see it, it will save a lot of spraying later.

DON'T tie plants with copper wire—they hate it and it will poison them or burn them.

DON'T take off pups when they are too small. They take a lot longer to root. Remove them when they are about half the size of the mother plant. Quite often they have grown their own roots by then.

DON'T water plants when the sun is on them as it can cause burn on the leaves of the more tender kinds.

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Water

(by Lloyd P. Champagne)

Editorial comment (Bob Reilly): Reprinted, with permission of the Bromeliad Society International, from the Journal of the Bromeliad Society, July-August 1977, v. XXVII (4) pp 150-153. In this article, a Louisiana (United States of America) grower gave his views on watering bromeliads. He made the valuable point that many bromeliads grow well with far less water than some people give them.

The subject may sound mundane. However, I suggest to you that it is the single most important topic in the culture of bromeliads, as it probably is in the culture of most plants. I further submit that it is also the most frequent cause of dead plants in the entire ornamental plant business.

It is impossible to talk about watering plants without considering many other factors that also affect watering. These other factors include the type of soil, the surrounding humidity, the size of the pot, the number of plants in each pot, the amount of sunlight, surrounding temperature, air flow, to mention the more important ones. Therefore, it is almost useless to ask your fellow-growers how often they water. What works for them may not work for you, due to the listed variables.

The first thing we normally learn about bromeliads is that they do not like wet feet. This is the first thing I learned about them, and I am sad to say that I have not followed the rule sufficiently. It is not at all sufficient that there merely be good drainage in the pot. The fact of the matter is that the roots of bromeliads generally like to be thoroughly (I said thoroughly, I mean it, and I repeat it) dry between waterings. There is only one proper way to determine when to water, and that is

to feel the soil. I suggest to you that as long as there is any coolness whatsoever to the soil, it is not time to water.

As the years go on, I find myself mixing an ever-looser and faster drying soil. I believe that it really doesn't matter one whit what mixture you use, as long as it is fast drying. I have experimented and continue to experiment constantly with different potting mixtures. I find that the slowest drying soil of all is any soil with a lot of leaf mold. Leaf mold retains water longer than other medium, and has the further disadvantage of "souring" when it remains damp. Also leaf mold "packs", and prevents aeration of the roots. Other undesirable substances in high concentrations are sphagnum moss, sawdust, wood shavings, and any other type of organic material that has a tendency to pack. Surprisingly, sharp sand, by itself, is very slow drying.

On the other end of the spectrum, whatever you use, I advise very high concen-

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trations of perlite, shredded tree fern, and/or hadite in order to keep the soil very loose and well aerated and rapidly drying. This becomes especially important when a grower grows bromeliads along with various other plants that require "en masse" watering. As one's collection grows, it becomes increasingly impossible to give individual attention to the plants. Therefore, that all should be watered at the proper time, can only be accomplished by using the proper size of pot and the proper moisture retaining properties of the soil, in order to get the proper amount of drying all at the same time. Even then it becomes difficult.

I keep several plastic gallon jugs around my greenhouse filled with water, so that I may give some individual plants a drink as I make my twice-daily tour, as they may need it, while awaiting the en masse watering. As one's collection grows, it is likely you will find that watering becomes less frequent due to the increasing amounts of water which

must be evaporated, the closeness of the pot plants, decreased sunshine and air circulation, and all of the other factors listed above. This is especially true when one moves into a greenhouse. Again, it becomes more likely when one may tend to close up a greenhouse for the winter, with the resulting coolness of winter, decreased fresh air and circulation, as well as decreased sunlight, slower growth, and lesser need for water.

Most of the bromeliads I have seen killed have been killed with tender loving care. Surely, we all have seen some plants neglected to death, but I consider this the exception. I have never killed a bromeliad with lack of water. I tried to do this in the summer just past, and I failed. I took a pot of *Neoregelia* 'Painted Fingernails' to one of the far corners of my yard, out in the mid-day sun. I never watered it once throughout the entire summer. It survived on water and dew only. I even ran across it inadvertently a couple of times with my tractor's wheel. We went through at least two dry spells during the summer without any rain whatsoever for six weeks. When I brought this plant indoors in October, it was beautifully healthy, hardy, and growing well. Yes, it was also dry.

Almost none of my bromeliad-nut friends have succeeded in raising *guzmanias*. I am having wonderful luck. I am sure the reason for my good luck is that I use this extremely coarse soil, a small pot, a lot of air, and even a substantial amount of direct sunshine. My dear friend, Art Boe, and I, have had some vigorous but friendly arguments over planting with sphagnum moss and tying the moss to the plant. He even does this with seedlings, even *guzmania* seedlings. He claims this reduces the shock of transplanting. I agree with his contention that it may help support a plant in the soil, but I also insist that it is a sure fire method of rotting the plant.

I am constantly reading references in

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the Journal about browning and softening at the bases of the leaves. Without exception, this is always referred to as fungus rot. I stress the fact that I am not a professional botanist, nor a microbiologist. Even so, I insist that any fungus that may occur is a purely incidental phenomenon and is not the cause of this leaf rot. The real reason, is, naturally, water. Any time you have a browning or a softening or rotting of the leaves near the base of the plant it is due to wet rot. If you are having to remove leaves from the base of the plant, cut down on your watering. The problem is that it may take months after the excessive watering before the rot becomes evident. In the extreme cases it is possible to smell the sour water. I have a general rule in life: when in doubt, don't. This is a good rule for watering bromeliads.

As a physician, I have been brought up on the enormous life saving properties of fluids and electrolyte replacement in humans. This alone has saved more infant lives than any other phenomenon in medical practice. I truly suffer as I walk through the greenhouse, noting the dryness of the plants, and I so terribly want to water them, but I don't. It is even a good idea to dump the water out of the cup of certain plants such as *Tillandsia xerographica*, and even more so during winter.

I have already referred to outdoor humidity. Certainly, one has to take these admonitions in view of the fact that the humidity in Louisiana (where the author lived-Bob Reilly) is often 100%, and I have seen it as low as 6% in Denver. We have never seen 6% humidity in Louisiana. I have seen my brother thoroughly soak an outdoor garden in Denver, and one hour later, it is bone dry. It naturally follows that over-watering is much less a hazard in areas of extremely low humidity.

I also suggest that most bromeliad diseases result from over-watering. I certainly

know that scale is one disease that I have totally eliminated by dryness. About the only "disease" I have are crickets and/or grasshoppers that inhabit the cup of the guzmanias and cut the leaf in order to pull it over for protection.

During the cool, overcast, wet days of winter, my greenhouse is like a terrarium. The moisture condenses on the cool roof and literally rains or drizzles in the greenhouse. It is during this type of weather that I water as little as once every 18 days. I never mist. The humidity is always so high in Louisiana, it seems senseless to mist. How much higher humidity can one get than 100%? When I do water, I find it necessary to soak everything thoroughly in order to be sure that none of the plants become neglected.

As I mentioned, I water everything en masse, without any individual attention. Now, misting may be useful in some of the drier regions. However, I find that so many people who do mist their plants, don't know when to stop. And they so over-mist, that they substantially soak the plant. Even in the hottest, driest days of summer, I never water more than once every five days.

I have also found that any kind of small electric fan is very useful to keep the air moving. The only beneficial effect that this can have is to hasten the drying process. In so doing, it guarantees the drying of the plants that may be somewhat crowded and less well aerated. It also follows that during winter, the cooler that you keep your plants, the less water they need. There are several reasons for this situation. Evaporation is slower, plant growth is slower and requires less water, and there is less danger of excessive drying out (if that is, in fact, possible).

I don't talk to my plants except to warn them to shape up or ship out. I think that the plant talkers, while they are talking to their plants, are also feeling the soil.

Another Use for Bromeliads

(by Bea Hanson)

Editorial Comment (Bob Reilly): Reprinted, with permission of the New Zealand Bromeliad Society, from the Bulletin, August 1992, p.8. In this article, Bea Hanson, one of the bromeliad pioneers in New Zealand, describes how she "blended" rocks and bromeliads in landscape settings. Please note that New Zealand growing conditions are much milder than in Queensland, so more shade is generally needed than indicated by Ms Hansen.

Some people are lucky (or maybe they think they aren't) in that they have a few rocks in their gardens. Maybe they have often wondered how they could use them in a different way to edging a garden bed or making a rockery.

How about making a bromeliad garden using the rocks along with some bromeliads? If you are able to get red scoria rocks or already have some, then they are the best. If not, then the grey kind can be used successfully. Some rocks can be placed in a group with bromeliads growing amongst them. You will have great fun arranging them and be sure to try them in different places before putting them in permanently.

If you have a nicely shaped rock with a dent in the centre you can grow a bromeliad in it. *Aechmea recurvata* and their hybrids look great on rocks and they love it. Stoloniferous neoregelias do well on rocks and will look good when you have several stolons growing from the main plant. Once firmly attached to the rocks they are almost impossible to move.

To add height, you could add plant a variegated *Ananas* or something else tall and bright. Remember that if the rock patch is in full sun all day, any dark red broms would tend to burn, so place them in a situation where they get some shade for part of the day.

Hechtia and *Dyckia* plants do well in a rock garden and when in flower they add height to the picture. Also, they soon form clumps, which is an added bonus.

This is just an idea that someone might like to try, add to, or alter. You will have a lot of fun doing it and your artistic bent will come to the fore. The garden can be as small, or as large, as you like, but I am sure—large or small, that you will enjoy seeing how bromeliads can be used other than as pot plants, in trees, or grown in shade or glasshouses.

I must dash. Have to go and see how many red scoria rocks I have left from some I got years ago. If I have enough maybe I could do a garden as well! But where could I make it? Oh well, I can dream.

Books For Sale

The Society has the following books for sale:

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|---|------|
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| • Judges Handbook by BSI | \$34 |
| • Back Copies of Bromeliaceae (2005, 2006 Editions) | \$4 |
| • Bromeliads for the Contemporary Garden by Andrew Steens | \$36 |
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Postage and package extra. Unfortunately we cannot supply overseas orders. Please phone the Librarian, Mrs Evelyn Rees (07) 3355 0432 to order books.

Plant Competition Results

Annual Results - Popular Vote

Advanced

	First	L. & O. Trevor	22 points
	Second	Y Daniel	18 points

Intermediate

	First	L Grubb	40 points
	Second	B & A Kable	26 points

Novice

	First	A. Mc Burnie & P Beard	40 points
	Second	P Barlow	9 points

August Meeting - Popular Vote

Advanced

	First	B. Paulson	<i>Dyckia</i> 'Black Tracker' (unreg)
	Second	D. & J. Upton	<i>Fosterella spectabilis</i>

Intermediate

	First	L. Gamble	<i>Neoregelia carolinae</i> x <i>carcharodon</i>
	Second	L. Gamble	<i>Guzmania conifera</i>

Novice

	First	A. McBurnie	
	Second	P. Barlow	<i>Guzmania</i> 'Symphonie'

November Meeting - Popular Vote

Advanced

	First	D. Cutcliffe	<i>Aechmea</i> 'Popcorn'
	Second	D, Cutcliffe	<i>Neoregelia</i> 'Crayola'

Intermediate

	First	G. & N. Aizlewood	<i>Billbergia</i> 'Goldern Joy'
	Second	B. % N. Kable	<i>Nidularium rutlans</i>

Novice

	First	A. McBurnie & P Beard	'Galactic Warrior'
	Second	P. Barlow & N Parkinson	<i>Neoregelia</i> 'Kings Ransom'

Calendar of Events

January 18th - First Meeting of Society for year, 52 Merthyr Rd., New Farm,

February 15th - Annual General Meeting of the Bromeliad Society of Queensland (Inc.) commencing at 8 pm in the Uniting Church Hall, 52 Merthyr Road, New Farm

April 21st-22nd. - Autumn Show and Plant Sales at Mt Cootha Botanic Gardens, 8 am to 4 pm Saturday, 9 am to 3 pm Sunday.

GENERAL MEETINGS of the Society are held on the 3rd Thursday of each month except for December, at the Uniting Hall, 52 Merthyr Rd., New Farm, Brisbane, commencing 8 pm. Classes for beginners commence at 7.30 pm.

Plant of the Month Programme for 2007

JANUARY:	Aechmea, Alcantarea, Ananas, Androlepis, Areococcus, Ayensua.
FEBRUARY:	Billbergia, Brewcaria, Brocchinia, Bromelia.
MARCH:	Canistropsis, Canistrum, Catopsis, Deinacanthos, Deuterocohnia, Disteganthus, Dyckia.
APRIL:	Edmundoa, Encholirium, Fascicularia, Fernseea, Fosterella, Glomero pitcairnia, Greigia, Guzmania.
MAY:	Hechtia, Hohenbergia, Hohenbergiopsis, Lindmania, Lymania, Mezobromelia.
JUNE:	Navia, Neoregelia.
JULY:	Nidularium, Ochagavia, Orthophytum.
AUGUST:	Pepinia, Pitcairnia, Portea, Psuedaechmea, Psuedananas, Puya.
SEPTEMBER:	Quesnelia, Racinaea, Ronnbergia, Steyerbromelia.
OCTOBER:	Tillandsia.
NOVEMBER:	Ursulaea, Vriesea, Werauhia, Wittrockia.

Competition Schedule for 2007

Novice, Intermediate and Advanced in each Class of the Mini-Shows and in the Popular Vote.

January: MINI-SHOW

Class 1: Aechmea - species and hybrids

Class 2: Vriesea - species and hybrids

Class 3: Dyckia - species and hybrids

Class 4: Any Other Mature (flowering) Bromeliad - species and hybrids.

February: **POPULAR VOTE:** Any Genus – species or hybrid

March: **POPULAR VOTE:** Any Genus – species or hybrid

April: MINI-SHOW

Class 1: Bromelioideae not listed elsewhere in the schedule – species and hybrids.

Class 2: Guzmania - species and hybrids

Class 3: Pitcairnia and Pepinia - species and hybrids

Class 4: Any Other Mature (flowering) Bromeliad - species and hybrids.

May: **POPULAR VOTE:** Any Genus – species or hybrid

June: **POPULAR VOTE:** Any Genus – species or hybrid

July: MINI-SHOW

Class 1: Billbergia - species and hybrids

Class 2: Tillandsioideae not listed elsewhere in the schedule – species and hybrids.

Class 3: Neoregelia - species and hybrids – up to 200mm diameter when mature.

Class 4: Any Other Mature (flowering) Bromeliad - species and hybrids.

August: **POPULAR VOTE:** Any Genus – species or hybrid

September: **POPULAR VOTE:** Any Genus – species or hybrid

October: MINI-SHOW

Class 1: Neoregelia - species and hybrids – over 200mm diameter when mature.

Class 2: Tillandsia - species and hybrids.

Class 3: Pitcairnioideae not listed elsewhere in the schedule – species and hybrids.

Class 4: Any Other Mature (flowering) Bromeliad - species and hybrids.

November: **POPULAR VOTE:** Any Genus – species or hybrid

Note 1: Class 4 in each Mini Show schedule provides for any flowering bromeliad that would not be in its prime for the appropriate Mini Show.



Canistrum triangulare (species)