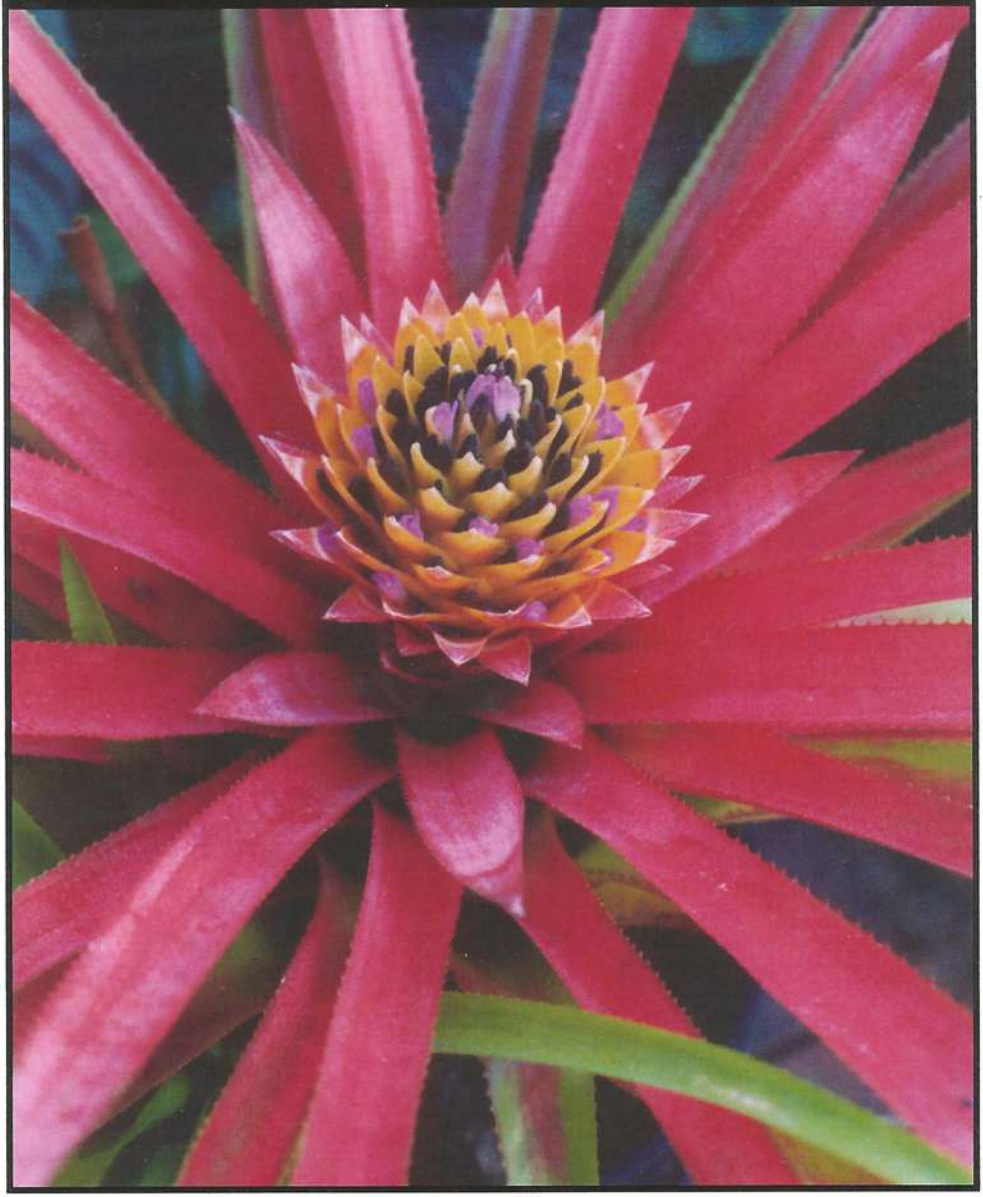
Bromeliaceae



Volume XXXVIII– No. 5 – September / October 2004

The Bromeliad Society of Queensland Inc.

P. O. Box 565, Fortitude Valley
Queensland, Australia, 4006.
Home Page www.bsq.org.au

OFFICE—BEARERS 2004-2005

OFFICERS		
PRESIDENT	Mr. Wayne Lyons	Ph 07 3202 8454
VICE PRESIDENT	Mr. Doug Upton	Ph 07 3378 3511
PAST PRESIDENT	Mr. John Higgins	Ph 07 3800 2561
SECRETARY	Mrs. Fran Dawson	Ph 07 3889 0770
TREASURER	vacant	
MANAGEMENT COMMITTEE	Mr. J. Higgins, Mr. D. Rees, Mr. M. O'Dea Mr. K. Dawson, Mrs. O. Trevor, Mr. L. Trevor Mr. V. Duncan, Mr. G. Cuffe, Mr. R. Cross	
MINUTE SECRETARY	Ms. N Tucker	
AUDITOR	Mrs. Anna Harris	
FIRE ANT CO-ORDINATOR	Mrs. N. Davis	
COMBINED SHOW COMMITTEE	Ms. N. Tucker, Mr. R. Cross, Mr. M. O'Dea Mr. J. Higgins, Mr. N. Ryan, Mr. R. Reilly	
CONVENTION COMMITTEE	Mr. G. Cuffe (Convenor), Mrs. R. Higgins (Finance & Registration) Mr. R. Cross (Display), Mr. W. Lyons	
BROMELIACEAE		
Editor	vacant	
Photography	Mr. D. Upton, Mr. K. Dawson, Mr. V. Duncan	
Mail Out	R. & B. Pugh	
Reporters	A. McBurnie, N. Aizelwood, B. Reilly	
Editorial Committee	vacant	
SALES AREA STEWARD	Mrs. N. Poole	
FIELD DAY CO-ORDINATOR	Mrs. N. Kickbusch	Ph 07 3300 1704
LIBRARIAN	Mrs. Evelyn Rees	Ph 07 3355 0432
SHOW ORGANISERS	Mr. B. Cross, Mrs. O. Trevor	
SUPPER STEWARDS	Mr. N. Ryan, Mr. B. Genn	
PLANT SALES	Mrs. N. Kickbusch (Convenor), Ms. N. Poole (Steward)	
COMPETITION STEWARDS	Mrs. R. Higgins, Mr. A. James	
HOSTESSES	Mrs. D. Cutcliffe & Mrs. J. Upton	
HALL STEWARD	Mr. D. Brown	
LIFE MEMBERS	Mrs. Grace Goode OAM, Mr. Bert Wilson Mr. Peter Paroz, Mrs. Patricia O'Dea Mr. Michael O'Dea	

Contents

The Bromeliad Society of Queensland Inc.

Society Badges

ARE NOW AVAILABLE $5.00 EACH

***Bromeliaceae* COPY**

We are constantly looking for articles for your magazine

Please forward all copy to The Management Committee—In **Times New Roman and using MS word**

Photographs to Doug Upton, 101 Jerrang St. Indooroopilly, Qld, 4068
Phone 07 3378 3511

Cover Photographs

Front Cover:

The magnificent display and colouration of *Aechmea biflora* att the time of flowering. The colour lasts for several weeks and commands attention as it is extremely noticeable from a distance. The plants normally have a small number of pups after flowering (usually one or two). Prior to flowering, the plants are a light to mid green. See pages 12 and 13 for further information.

Back Cover:

Vriesea poelmanii, one of the many "green leaved" Vreiseas written about in the feature article of this issue. Many collectors start growing these Vrieseas when they commence collecting as they are generally easy to grow and also readily reproduce often sending out a multitude of offsets. They are also generally fast growers and can usually attain flowering size within a year. These plants are also readily available and comparatively cheap to buy which also adds to their popularity

All photos by Doug Upton, Bob Reilly or Greg Cuffe and used with permission. Photograph of Allan Freeman by Carmel Cullen and used with permission.

Society Diary

NEWS REPORTS EVENTS

GENERAL MEETINGS are held on the Third Thursday of each month except December, at the Uniting Church Hall, 52 Merthyr Road, New Farm, Brisbane, commencing 8 p.m.
Classes for beginners commence at 7.30 p.m.
FIELD DAYS are held regularly in the gardens of members as advised .
MEMBERSHIP FEES Family $20, Single $15 pa
The BSQ Web Page can be accessed at www.bsq.org.au

Competition Results

September Popular Vote

Novice		
First	*Vriesea ospinae.*	N. Romanink
Second	*Aechmea* 'Pie in the sky'	P. Butler
	Neoregelia 'George's Prince'	L. Grubb
Intermediate		
First	*Tillandsia fasiculata*	B. Reilly
Second	*Quesnelia edmundorfii*	B. Reilly
Advanced		
First	Vriesea guttata	P. Paroz
Second	Guzmania 'Symphony'	Y. Daniels & L. Gerchow

October Mini Show

Novice		
Class 1		
First	*Neoregelia* 'Phyllis Hobbs'	B. & A. Kable
Second	*Neoregelia concentrica x concentrica x carcharadon* 'Albo marginata'	P. Blundell
Class 2		
First	*Tillandsia vincentina*	B. & A. Kable
Class 4		
First	*Canistrum triangulare*	B. & A. Kable
Second	*Nidularium innocentii* variegata	B. Batchelor
Intermediate		
Class 1		
Second	*Neoregelia* 'Charm no. 10'	P. Crawford
Second	*Neoregelia* 'Carnival'	G & N Aizlewood

Class 2		
First	*Tillandsia deppeana*	G. & N. Aizlewood
Second	*Tillandsia fasiculata* var. Red Mex	B. Reilly
Class 4		
First	*Nidularium Raru*	G. & N. Aizlewood
Second	*Nidularium innocentii lineatum*	P. Crawford
Advanced		
Class 1		
First	*Neoregelia* 'King's Ransom'	R. Paulsen
Second	*Neoregelia johannis* variegata	D. & J. Upton
Class 2		
First	*Tillandsia fasiculata*	C. &. D. Cutcliffe
Second	*Tillandsia chlorophylla*	R. Paulsen
Class 4		
First	*Canistrum sp.*	Y. Daniels & L. Gerchow

.....

Bromeliads XIII Conference —
Brisbane, Australia

October 14 –17, 2005

International, Interstate and Local speakers, Plant Displays and Sales, Bus Trips to Local Collections and Gardens, Dinners, Raffles and Auctions.

To be held at the Bardon Professional Centre

Intending delegates will be advised in due course regarding bookings that will be able to be made direct with the venue. No bookings will be taken until they are opened at a date to be advised by the conference committee.
If you wish to have a display during the conference, then please advise the conference committee as soon as possible.

.....

The Green Leaved Vriesea's *Bob Reilly*

Most vrieseas are grown for their inflorescences, rather than their foliage. In this article, I describe them as the green-leaved vrieseas.

The Vriesea genus was recognised by botanists in 1843, and named inhonour of the Dutch botanist, H. de Vries. Even before that date, vrieseas were introduced into Europe, with *V. splendens* arriving in 1840.

While there are several hundred vriesea species, over a thousand hybrids exist, most of which have not been formally registered. This is unfortunate, as it is difficult to easily " spread the word" about an outstanding, unregistered hybrid. The green-leaved vrieseas are mainly epiphytes and occur in moist shaded conditions in nature. They usually occur in environments similar to those prevailing in southern coastal Queensland.

All of the green-leaved vrieseas have "tanks" formed by their central leaves. These tanks store water that helps the plants to meet their moisture requirements. All have spineless leaves. Potting mixtures used successfully include:

- A mixture comprised of 1 part charcoal to 7 parts of fertiliser – treated pine bark chunks. The chunks should be about 15 to 20 mm in diameter and treated with a special type of fertiliser, which is available from the Bromeliad Society of Queensland;
- Well-composted pine bark to which slow (over a period of nine months or more) release Nutricote or Osmocote is added when the plants are potted. Some people prefer to add Cocopeat or peatmoss to this mixture to improve its ability to retain moisture.
- Coarsely ground "clinker" to which slow release Nutricote or Osmocote is added.
- A mixture comprised of 1 part coarse river sand to 1 part Cocopeat or peatmoss. Slow release Nutricote or Osmocote is added to this mixture.

Vrieseas appreciate receiving regular feeding with liquid fertiliser. It is essential to do this if you wish to maximise the size of your plants' inflorescences. A fertiliser such as Phostrogen applied at weekly intervals, at the concentration recommended by the manufacturer for indoor plants, produces good results for many growers.

These plants vary considerably in their production of offsets (pups). Most produce pups arising from the leaves near their base. They will typically produce two or three pups after they have flowered. Remove these when they are third to one half of the mature plant's size. More "pups" can then often be induced by fertilising the "mother plants" with Nutricote or Osmocote.

Pups removed during the periods mid September to late November, and mid February to late March, will often grow better than those removed at other times. Pot the pups straight into the mixture you use for mature plants.

Many of these plants grow best under medium density (70% to 75%) shadecloth. Plants with leaves having brown spots, or a bleached/yellowed appearance, are receiving too much light.

The plants like plenty of air movement around them. Place them on benches at least 20 cm above the ground. If practical, space the plants so the edges of their outer leaves are only just touching (Regrettably, due to my desire to own "just one more plant", I seldom follow my own advice on this point, but the plants do suffer because of my weakness!)

In winter, water the plants heavily once a week, in the morning between 7am and 10am (if practical). During summer, water them heavily at least twice a week during the early morning (6am to 8am) or late afternoon (4pm to 6pm). If practical, dampen the foliage once a day in early morning or late afternoon when the temperature exceeds 30 degrees Celsius. (A heavy watering results in water coming out of the pot's base for several minutes).

These vrieseas can suffer from flyspeck scale. This insect pest can be treated with a systemic insecticide such as Folimat. Some are susceptible to grasshopper attacks. These are best dealt with by squashing them (They are easy to catch early in the morning).

The examples of green-leaved vriesea hybrids and species described in this article are, generally speaking, readily available. They can be obtained from bromeliad nurseries, at monthly meetings of the Society, and during the June and November shows. I have only described smaller plants, as most people have only a limited amount of space for their collections.

'Barbarossa Red' Approximately 15 green leaves, 3 cm wide, form an open rosette about 40 cm across. The multi-branched, orange-red spike rises

The Editors Desk

while the flowers have yellow petals.

'Barbarossa Yellow' A plant which is similar to 'Barbarossa Red', except that the infloresence is yellow, instead of orange-red, in colour.

'Belgische' Approximately 20, 5 cm wide, green leaves form a 50 cm wide flat rosette. The red, multi-branched spike rises about 40 cm above the plant's leaves. Each of the branches is about 15 by 6 cm, while the flowers have yellow petals.

'Bobbie' Approximately 30, 4 cm wide, light green leaves form a 40cm wide, open rosette, about 30 cm high. The multi-branched infloresence has about 10 dark red branches, each of which is around 20 by 2 cm initially, changing to 20 by 5 cm as flowering progresses. The flowers have yellow petals.

carinata Approximately 20, 2 cm wide, light green leaves form a semi-erect rosette around 15 cm across. A 7 to 10 cm long spike rises well above the plant's leaves. The spike's centre is a bright crimson-red, turning to yellow-green at its edges. The flowers have yellow petals. This plant is one of the hardiest bromeliads, and one of the first plants most people acquire.

'Christiane' Approximately 20, 3 cm wide, green leaves form a semi-erect rosette around 40 cm across. A multi-branched red spike rises well above the plant's leaves. The size of each branch varies, ranging from 8 by 4 cm, to 15 by 5 cm. The flowers have yellow petals.

chrysostachys Approximately 10, 4 cm wide, leaves form an erect, open rosette, about 50 cm across. The green leaves have faint grey "scurfing" on both surfaces. They are brown-red on their lower surface, near the plant's centre. The infloresence rises well above the plant's leaves, and is about 20 by 2 cm. (Multi-branched infloresences sometimes occur.) The colour of the

infloresence can be yellow, orange or red.

corriea-araujii Numerous, narrow, light green leaves, which are brown at their base, form an erect rosette about 13 cm high and wide. The plant rapidly forms a small clump. The infloresence, which rises well above the plant's leaves, consists of about 10 flowers with white petals. Flowering rarely occurs until a clump is formed.

ensiformis Around 20, 5 cm wide, green leaves form an erect rosette about 50 cm across. (In some clones, the leaves' lower surface is a reddish colour.) The red, sword-shaped infloresence rises well above the plant's leaves. It is about 30 by 8 cm. The flowers have yellow petals.

erythrodactylon Approximately 15, 3 cm wide, green leaves form a semi-erect rosette about 30 cm across. The sword-shaped infloresence has a yellow centre. Its edges are green at the base, and red at the tips. The infloresence is 10 to 30 cm long, and 5 to 10 cm wide. The flowers have yellow tips.

'Golden Thread' Around 20, 3 cm wide, leaves light green leaves form an erect rosette about 35 cm across. The 15 by 5 cm, sword-shaped infloresence rises well above the plant's leaves. It has a red centre, with the remainder being yellow in colour. The flowers have yellow petals.

'Gunther' Around 20, 3 cm wide, green leaves from a semi-erect rosette, approximately 30 cm across. The green leaves have longitudinal white stipes of varying widths in their centres. The crimson-red, sword-shaped spike is about 15 by 5 cm. The flowers have yellow petals.

heliconioides Approximately 15, 3 cm wide, green leaves form a flat rosette about 40 cm across. The sword-shaped infloresence is around 25 by 7 cm, and pale green to red in colour. The flowers have white petals. The infloresence is "twisted" in appearance, giving rise to the species' name.

infalata v. seideliana About 20, 4 cm wide, green leaves form a flat rosette approximately 40 cm across. The infloresence consists of a 20 by 5 cm, orange-red spike. Initially, the infloresence is semi-pendent, but then becomes erect.

'Moonglow' Around 30, 2 cm wide, green leaves form a semi-erect rosette approximately 60 cm across. The pale green leaves are marked with

irregular, wavy, thin, dark green horizontal lines. The 50 cm long, multi-branched infloresence rises well above the plant's leaves. Each branch, which is approximately 20 by 5 cm at flowering, is red-orange near its centre, and yellow-green at the tip.

'Oogenlust' Approximately 15, 3 cm wide, light green leaves form a 30 cm wide rosette, about 20 cm high. The infloresence is a red-orange, sword-shaped spike, about 20 by 6 cm. The flowers have yellow petals.

'Plantation Pride' Around 20, 5cm wide, leaves form a semi-erect rosette about 60 cm across. The light green leaves have faint, dark green markings. The multi-branched infloresence rises well above the plant's leaves. Each of the yellow-orange branches is about 15 by 3 cm.

'poelmanii Eric' About 20, 3 cm wide, light green leaves, with faint dark green markings, form a semi-erect rosette approximately 40 cm across. The 15 by 5 cm, sword-shaped spike, which rises well above the plant's leaves, is coloured red and yellow.

'poelmanii Ginger' Around 20, 2 cm wide, glossy green leaves form a compact rosette about 40 cm across. The multi-branched infloresence rises well above the plant's leaves. Each branch is bright red, and about 20 by 5 cm.

poenulata Numerous thin, green leaves, which have brown-red spotting towards their base, form an erect rosette about 15 cm wide and high. The plant fairly quickly forms a small clump. The pendent infloresence initially rises just above, and then to the side of the rosette. It consists of about 10 flowers.

'Rainbow Lorrie' Approximately 20, 3cm wide, pale green leaves form a semi-erect rosette about 40 cm across. The semi-pendent, multi-branched infloresence often has seven branches. Each of these is about 10 by 5 cm, pink-red in the centre and yellow at its edges. The flowers have yellow petals with green tips. For many years, this plant was sold as: " multi-branched carinata hybrid".

'Shimo Ryu' Approximately 20, 2 cm wide, green leaves from a rosette about 40 cm across. The 40 cm long, multi-branched infloresence rises well above the plant's leaves. Each branch is crimson-red, and 15 by 3 cm.

'Tanya' Approximately 20, 5 cm wide, pale green leaves from an open rosette about 50 cm across. The multi-branched infloresence rises 40 cm above the plant's leaves. Each branch is 15 by 3 cm, and orange-red in colour. The flowers have yellow petals.

'Viminalis Rex' (also known as 'Favorite') Around 20, 4 cm wide, green leaves from a 60 cm wide, semi-erect rosette. The 30 cm long, multi-branched infloresence rises well above the plant's leaves. Each branch is crimson-red, and about 15 by 5 cm.

'York Red' Approximately 15, 4 cm wide, green leaves form a flat rosette about 30cm across. The multi-branched infloresence rises about 40 cm above the plant's leaves. Each branch is crimson-red, and about 15 by 4 cm.

Acknowledgements I thank Doug Upton for taking the photographs used to illustrate this article.

Bob Reilly

Author's contact details: email- *bob.reilly@nrm.qld.gov.au*
phone (07) 3870 8029

.....

Photograph captions for centre pages 16 and 17

Page 16:	Top Left:	*Vriesea ensiformis*
	Top Right:	*Vriesea* 'Gunther'
	Bottom of Page:	*Vriesea* 'Ooegunlust'
Page 17:	Top Left:	*Vriesea* 'Christianne'
	Top Right:	*Vriesea erythrodactylon*
	Bottom of Page:	*Vriesea* 'Poelmanii' Ginger

NAVIA

Pat Coutts Mt. Elliot, QLD

I have a plant in my collection which originally came from Marie Selby Gardens via a friend in Florida who bought one in a Members day sale. The name tag was lost in quarantine, but I have always thought of it as *Navia splendens.*

The only photograph I can find of *Navia splendens* doesn't have coloured foliage at flowering time as has my plant but this could be a cultivation difference as my plant grows in the bright light of my Neo (sic) House. It has soft lime green foliage and soft spines.

The plant flowered and promptly died. Fortunately, I had a small pup which has grown large quickly and should flower soon.
Its growth habit is on a long fibrous stem producing offshoots at the base of the stem and at the base of the spent infloresence.

Navias come from the mysterious "Lost World" of Venezuela, a fantastic area of weird mountains called Tepuys which rise out of hot dry and tropical savannas and thickly forested banks of rivers and streams at an altitude which can only be guessed at but seems to be happy with the tropical humidity here at sea level in Townsville.

Supposedly Navias grow on steep cliffs and object to water being retained in their cups. But trying to keep the cvup drained, I feel, may have contributed to my plant's demise.

The moral of this story seems to be " If a plant appears happy, continue to grow it in the way that you always have." You may never have another chance.

.....

Some bromeliads, for example many of the large aechmeas and porteas, produce their pups at the end of "woody" stolons which exceed 2 cm in diameter. These stolons can be quite difficult to cut with secateurs. However, they are easily cut with small, hand-held pruning saws. These implements have curved blades about 20cm long, and can be purchased from many hardware stores and garden centres.

Ae Skotakii

Ae bifbra

Two Fascinating Aechmeas

By Greg Cuffe

In the last few months, I was very fortunate to have witnessed the anthesis of two of the more startling Aechmeas that are to be found in private collections in South East Queensland. One of these *Aechmea biflora* is widely spread and in many collections and is truly one of the more spectacular flowering events that you can witness. The other *Aechmea skotakii* is far less common and as a result was much more anticipated once the word came through from renowned grower Mike Symmons that the leaves were commencing to change colour. The plants are of similar size and habit and both were formerly members of the Streptocalyx alliance that has somewhat recently been folded back into Aechmea.

Both of these plants have a flat growing habit with narrow armed green leaves. Both are similar in appearance and are difficult to tell apart although the latter has slightly wider leaves near the centre. Both also generally have poor root systems and tend not to be 100% suited to pot culture, which is a feature of the true epiphytic bromeliads. Both produce pups well prior to anthesis and both hold their pups in a far more upright growing habit than the parent. This is a particularly attractive attribute to growers who are provided with an advanced progeny prior to the parent flowering.

Aechmea biflora in anthesis turns fire engine red from the centre of the plant and radiates out from the centre for about two thirds of the length of the leaves. On the other hand, *Aechmea skotakii* is more purple coloured when flowering. Both are amongst the most colourful and striking plants that would be sought after in collections. The photographs opposite show the striking colouration of both plants that should be enough to put them into the sought after ranks

.....

Photo captions:
Top: *Aechmea skotakii* showing the purple hues of this particular specimen in the early morning light. The photo was taken just a couple of days prior to flowering.

Bottom: The striking red colour exhibited by *Aechmea biflora* just prior to flowering.

APRIL 2004 FIELD DAY REPORT

The Society's first field day for 2004 was held at Jim and Beryl Batchelor's property at Capalaba. About 50 people attended the event. The Batchelor's property has been extensively landscaped, with most of the work being done over the last four years. Interesting features for me included:

- Effective use had been made of screens to create a series of gardens. Some screens were made of artificial materials such as treated pine logs, while others comprised clumps of plants such as palms.
- The integration of various palm species (particularly the clumping types), cordylines, crotons, and bromeliads, so as to create varied "gardenscapes". In particular, effective use had been made of the varying height and foliage colours of these plants to create "balanced" gardens.
- The light-coloured pebbles and pavers used throughout the garden provided an effective contrast to, and thus highlighted, plants in the garden beds.
- Orthophytums had been used in some of the garden's more sunny areas to good effect. (Many of these plants can take full sun, and their foliage colour is often quite striking.)
- Good use had been made of old logs and tree stumps to hold "pockets" of clumping, miniature neoregelias such as 'Little Jewel', 'Blister', Guinea', 'Blitzer', and *pauciflora.*

A series of "linked" shade structures and thatched "pavilions" was one of the garden's key attractions. It is called *Bee's Retreat.* Beryl told me the name reflected its use as a "retreat" from their former business, namely, the *Busy Bee's Linen Party Plan.*

Following morning tea, Arnold James and Doug Upton gave presentations to an appreciative audience. Arnold demonstrated the interesting results obtainable when you grow plants from the seed of hybrids. Widely varying plants, in terms of size and foliage colour, can result when neoregelia hybrids such as 'Charm' and 'Gold Fever' are allowed

to self pollinate. Occasionally, an exceptional plant arises from these seedlings.

Doug's talk focused on various aspects of vegetative propagation in bromeliads. He covered topics such as "growing on" adventitious offsets, and techniques for maximising the number of pups a plant produces. A particularly interesting suggestion was to expose a bromeliad's base by stripping away the plant's lower leaves. This action appears to stimulate pup production. (Although Doug stressed you should experiment with some of your more common plants, before you try this technique out on your rare ones!)

Thanks are due to Doug and Arnold for their presentations, Nancy Kickbusch for operating the plant sales' table, everyone who brought a "plate" for morning tea, and those who helped out in a variety of other ways on the day. A special "thank you" though, goes to Jim and Beryl for opening their lovely property to us.

.....

Bromeliad Tips

Hanging bromeliads in plastic pots is a popular way to grow many species, especially tillandsias and grey-leaved vrieseas. However, the plastic hangers often used to suspend such pots, can restrict the plant's development once it becomes fairly large.

One way of dealing with the issue is to use specially-made wire "supports". These have a wire circle which slides up the pot from its base, and a length of wire which is attached to one side of the wire circle. The length of wire has a hook at its other end which can be attached to a roof support. This arrangement results in the plant's growth not being constrained. It is desirable to cover the wire with plastic tubing wherever it is likely to come into contact with a plant's foliage. The wire supports can be obtained from some orchid nurseries.

VRIESEA ENSIFORMIS

BOOK REVIEW: LES TILLANDSIA ET LES RACINEAE

The book's author is Albert Roguenant. It was published by Belin, in 2001. While the book can be purchased through Belin, it is probably easier to buy it from Anwyl Bromeliads in New Zealand. They can be contacted at: anwyl.com
The book is written in French, which is interesting, as very few bromeliad books are published in France.

It commences with a brief history of the discovery of tillandsias (the genus *Racineae* has only been separated from *Tillandsia* in recent times), their habitat, and their commercial/cultural uses. Chapters follow on how to cultivate these plants, and their distinguishing characteristics, from a botanical perspective. A number of tillandsia hybrids are also listed.

A comprehensive listing of, and botanical key for, *Tillandsia* and *Racineae* species comprises the main part of the book. For each plant, there is a description of its growth habit, distribution, habitat, infloresence (including flowers), and usually, some comments on its culture. These are often complemented by a colour photograph, or line drawing, of the plant. Unfortunately, many of the photographs are not of flowering plants.

Over 650 tillandsias and 70 *Racineae* species are treated in this manner. This constitutes the most comprehensive treatment of these plants in a recently published book. By way of contrast, the *New Tillandsia Handbook* describes about 250 tillandsias.

The major drawback for most readers is that the book is written in French. However, with practice, and the aid of a French-English dictionary of botanical terms contained in the book, it is possible to translate most of the text without too much trouble. Treat the cultural suggestions with caution, as they are based on European growing conditions, which are quite different to those experienced in most of Australia.

Overall though, if you are a tillandsia collector, it is well worth purchasing this book. However, if you are just starting to collect tillandsias, then the *New Tillandsia Handbook* is probably a better book to purchase.

-Bob Reilly

PLANT OF THE MONTH PROGRAMME - 2005

Members are encouraged to bring plants along to the monthly meetings which are held on the third Thursday of each month at the Uniting Church Hall, Merthyr Road, New Farm. The nominated plants of the month are detailed below.

JANUARY:	*Aechmea, Alcantarea, Ananas, Androlepis, Areococcus, Ayensua.*
FEBRUARY:	*Billbergia, Brewcaria, Brocchinia, Bromelia.*
MARCH:	*Canistropsis, Canistrum, Catopsis, Deinacanthon, Deuterocohnia, Disteganthus, Dyckia.*
APRIL:	*Edmundoa, Encholirium, Fasciculatia, Fernseca, Fosterella, Glomeropitcaimia, Greigia, Guzmania.*
MAY:	*Hechtia, Hohenbergia, Hohenbergiopsis. Lindmania, Lymania, Mezobromelia*
JUNE:	*Navia, Neoregelia.*
JULY:	*Nidularium, Ochagavia, Orthophytum.*
AUGUST:	*Pepinia, Pitcairnia, Portea, Pseudaechmea, Pseudananus, Puya.*
SEPTEMBER:	*Quesnelia, Racinaea, Ronnbergia, Steyerbromelia.*
OCTOBER:	*Tillandsia, Tofieldia,*
NOVEMBER:	*Ursulaea, Vriesea, Werauhia, Wittrockia..*

....

A Tribute to a Man of Botanical Distinction
Hybridist - Allan Freeman
Carmel Cullen

I was fortunate enough to come into contact a few years ago with a man called Allan Freeman who lives in my area of Ipswich (QLD). I had no idea at the time that he was anything more than a general grower of bromeliads like me, as although I have collected them for many years picking them up from here and there, I had never been a member of a like-minded group of people.

Shortly after joining the Bromeliad Society of Queensland (BSQ), I began to hear growers expressing their desire of obtaining some "Freeman Hybrids." I then realised something astounding! Allan had let me have neoregelias from his final and what he considered his best batch of hybrids.

On subsequent visits I found Allan to be a man of humility, who although immensely proud of his hybrids, maintained that they should not be sold for more than any other bromeliad and he couldn't understand how others who had obtained them were selling them for exorbitant prices. His feelings were that they should be available to all that would appreciate them.

Allan demonstrated the hybridizing process and procedures, saying that he had been taught these same procedures by Grace Goode and he wanted to pass on whatever he had learned. He stressed that much thought must go into the selection of parents and their different attributes for any planned hybrids and never to put two plants together simply because they are ready at the same time.

I saw not only many lovely neoregelias but also lovely billbergias that Allan had hybridised as well. Always patient with new comers, and generous with the sharing of his knowledge, Allan's eyes would twinkle when he spoke about bromeliads almost as much as when he spoke about his grandchildren.

Unfortunately plagued with deteriorating health, Allan and his wife Narelle (after whom various Freeman hybrids are named) have recently moved into a town house where Allan has taken only a dozen of his best plants—just enough to fit on his balcony. How lucky those who acquired the rest must feel.

Opposite: Allan and a selection of his collection

WHAT IS A BROMELIAD?

The term "bromeliad" is a simplification of the scientific name *Bromeliaceae*, which covers any member of the pineapple family. Smith (1951) states that while we do not know who first used the term, it was probably a botanist or grower who was tired of using the cumbersome phrase "species of *Bromeliaceae*". Other, less commonly used, terms include: "bromels", "broms" or "brommies".

Bromeliaceae was derived by combining the genus name *Bromelia* with the ending "ceae". This action was taken by the French botanist, Jaume St. Hilaire, in 1805. In turn, the genus *Bromelia* was formally established by Dr. Carl von Linne (the Latin, and more commonly known, form of his name is: Linneaus) in 1754. (The original idea to have a genus similar to this name came from Charles Plumier, an early French explorer of the West Indies.) The genus name honours Olaf Bromel, a Swedish botanist who was well known in Europe at that time (Palmer, 1964; Smith,1951).

With practice, it is usually easy to distinguish most bromeliads from other plants. Luther (1995) p.64, has offered this advice:
"... There is a combination of characters, some of which are easy to see, some of which are very hard to see. If the plant has strap shaped leaves arranged in a rosette and those leaves have some type of scale or a scurf on them, if the flowers are [also] *arranged in threes, and if the flowers have dissimilar sepals and petals* [then the plant is almost certainly a bromeliad]..." In the article, Luther outlined some additional distinguishing characteristics, which I have not included here because of their technical nature.
Over time, it became necessary to divide the *Bromeliaceae* family into three sub-groups or sub-families. They are: Pitcairnioideae, Bromelioideae, and Tillandsioideae. According to the Bromeliad Society International's website (BSI, 2003), the most recent listing of genera in each sub-family is:
Pitcairnioideae: *Ayensua, Brewcaria, Brocchinia, Connellia, Cottendorfia, Deuterocohnia ,Dyckia, Encholirium, Fosterella, Hechtia, Lindmania, Navia, Pepinia, Pitcairnia, Puya, Steyerbromelia.* **Tillandsioidaea:** *Alcantarea, Catopsis, Glomeropitcairnia, Guzmania, Mezobromelia, Racinaea, Tillandsia, Vriesea, Werauhia.*

Bromelioideae: *Acanthostachys, Aechmea, Ananas, Androlepsis, Araeococcus, Billbergia, Bromelia, Canistropsis, Canistrum, Cryptanthus, Deinacanthon, Disteganthus, Edmundoa, Fasicularia, Fernseea, Greigia, Hohenbergia, Hohenbergiopsis, Lymania, Neoglaziovia, Neoregelia, Nidularium, Ochagavia, Orthophytum, Portea, Pseudaechmea, Pseudananus, Quesnelia, Ronnbergia, Ursulaea, Wittrockia.*

This list of genera will change over time. For example, the creation of new genera in *Aechmea* and *Tillandsia* appears likely, while most botanists consider *Pepinia* should be "combined" with *Pitcairnia* (from whence it originally came!)

Many bromeliad genera have been named to honour famous botanists or horticulturalists (Palmer, 1964; Lawrence, 1960). Examples are: *Billbergia*: Gustave Johannes Billberg, a Swedish botanist; *Cottendorfia*: Baron Cotta von Cottendorf, German botanist; *Fosterella*: Mulford B Foster, United States' bromeliad explorer and horticulturalist; *Guzmania*: A. Guzman, Spanish naturalist; *Lymania*: Lyman B Smith, United States' bromeliad taxonomist; *Neoglaziovia*: A. Glasiou, collector of Brazilian bromeliads; *Neoregelia*: Edouard von Regel, director of the St. Petersburg (Leningrad) Botanic Gardens in Russia; *Tillandsia*: Elias Tillands, Finnish botanist; *Vriesea*: Dr de Vriese, Dutch botanist; and *Wittrockia*: V. Bracher Wittrock, Swedish botanist.

There are at least two genera with names derived from South American Indian languages. They are: *Puya* (meaning "point") from the Mapuche Indians of Chile, and *Ananas* from the Guarani tribe of Brazil (Smith, 1952).

The names of other genera are largely derived from classical Latin or Creek (Palmer, 1964; Smith, 1952). The derivation of some names is obvious. Examples are: *Nidularium*- nestbearer, referring to the cluster of "leaves" around the flowers; *Canistrum*-little basket, referring to the infloresence in a basket of bracts; and *Aechmea*: spike or spear, referring to the long spines on the sepals of *Ae. paniculata*, the first species described in the genus.
However, the meaning of other genera names is unclear. For example, *Orthophytum* is derived from "ortho"-straight and "phytum"-plant, while *Catopsis* is Creek for view.

The Pitcairnioideae sub-family probably contains the most ancient bromeliads. Most are terrestrial in their growth habit, and rely on an extensive root system (as opposed to their leaves) to obtain water and nutrients (BSI, 2003). The most common genera seen in Queensland collections are *Pitcairnia* and *Pepinia*. A few species of *Dyckia, Hechtia*, and *Puya* are also occasionally seen.

The Bromelioideae sub-family's representatives all have berry-like fruit with seeds immersed in the fruit's "pulp" (Foster, 1951). Nearly all of them have leaves edged with spines of varying sizes. The majority of the commonly grown species are epiphytic (and thus obtain most of their water and nutrients through their leaves rather than their roots); although some are terrestrial. Many species have rosette-like shapes, which often form a water-holding tank in the plant's centre (BSI, 2003). The most commonly grown plant of this sub-family is undoubtedly the pineapple, *Ananas cosmos*. Other species often seen in Queensland gardens include: *Billbergia pyramidalis*, and *Portea petropoltina var. extensa*. Amongst bromeliad growers, popular genera are: *Aechmea, Neoregelia, Nidularium*, and *Portea*. Genera seen less often include: *Ananas* (ornamental forms), *Billbergia, Cryptanthus, Quesnelia, Ursulaea*, and *Wittrockia.*

The Tillandsioideae sub-family has more species than either of the other sub-families. Most species are epiphytes, and all have spineless leaves. All of their seeds have a plumose appendage (which look something like a dandelion flower's "hairs") attached to them. Many of the species with grey leaves can survive in very dry (xeric) conditions (BSI, 2003; Foster, 1951).

Spanish moss (*Tillandsia usneoides*) is still the most commonly seen species of this sub-family in Queensland, even though many clumps of this species' "common" type have recently died (possibly through fungal attack). In bromeliad collections, the genera most frequently seen are: *Guzmania, Tillandsia*, and *Vriesea*. Less commonly seen are: *Alcantarea, Catopsis*, and *Werauhia.*

Harry Luther, from the Marie Selby Botanical Gardens in the United States, has compiled a list of the species in each genus. The listing contains 2,885 species (Luther, 2000). It can be borrowed from the Society's library, and can also be accessed on the Selby Botanical Gardens' website at: www.selby.org

With the exception of hybrids, bromeliads are usually botanically "defined" or named by a combination of their genus and species' names. An example of this "binominal" combination is *Tillandsia* (genus) *usneoides* (species). Where there are botanically significant differences within a species, the species "epithet" is combined with (in descending order of botanical variation) sub-species (abbreviation "ssp."), variety (var.), and forms (forma). As examples, one has: *Tillandsia fuchsii var. fuchsii forma gracilis*, and *T. landbeckii ssp. andina var. rigidor*. All such variations which have been generally accepted by botanists are listed in Luther (2000).

Differences between plants which are, essentially, only of horticultural significance can be given a cultivar name. Cultivar names are shown at the end of the botanical description. An example is *Billbergia* ' Kyoto', which is a variegated form of *Billbergia pyramidalis*.

The choice of the cultivar name is determined by a set of rules, which should be followed if you wish to name a cultivar. The cultivar name should also be registered with the Bromeliad Society International, which is the registration authority for all bromeliad cultivars.

The naming of hybrids, of which there are many thousands, is a separate topic in itself, and is not covered in this article.

I thank Derek Butcher for his help in preparing this article.

References

Bromeliad Society International (BSI) (2003) *Taxonomy* BSI website http://bsi.org

Foster M B (1951) How well do you know your bromeliads? *The Bromeliad Society Bulletin*, v 1(5), September-October 1951, pp49-50.

Lawrence S W (1960) A brief history of bromeliads *The Bromeliad Society Bulletin*, vX(1), January-February 1960, pp4-5.

Luther H E (1995) Panel discussion: Questions and Answers in *Proceedings of the 6th National Bromeliad Conference (Bromeliads VI).* Bromeliad Society of Australia, Central Coast (NSW)Bromeliad Society, Hunter District Bromeliad Society: Sydney.

Luther H E (2000) *An Alphabetical Listing of Bromeliad Binominals,* Seventh Edition The Bromeliad Society International: CA.

Palmer E H (1964) Nomenclature *The Bromeliad Society Bulletin* v XIV(3), May-June 1964, pp59-61.
Smith L B (1951) Why Bromeliad? *The Bromeliad Society Bulletin*, v 1(2), March-April 1951, p11.
Smith L B (1952) More Bromeliad Derivations. *The Bromeliad Society Bulletin*, v 2(1), January-February 1952, pp60-61.

.....

Springtime

Pat Coutts Mt Elliot, QLD

It has been said that there are no seasons in the tropics but summer and winter, however the birds and the bees still do what they have always done regardless. I have observed birds stealing my *Tillandsia usenoides* which I like to grow in clumps in the trees.

The pretty little Sunbirds with their curved beaks have long been the culprits but this year they have also woven part of a clump into a mat using tiny twigs and other vegetative materials, possibly as a base for one of their cute little hooded nests and just maybe I have them to thank for the pollination of some Tillandsias as they par-take of the nectar.

On another occasion, I observed a pair of Spangled Drongos demolishing another clump, what they didn't fly away with they shredded. A pair of Friarbirds were also guilty of this little bit of botanical vandalism.

This season I noticed damaged Tillandsias in an unenclosed but shaded area near the kitchen door. It has been my practice to bring flowering plants into this area so as we can enjoy their beauty without a trip to the bushhouses. In vain I searched for the pesky insect then one day, all was revealed. The culprit was a Cat Bird (Bower Bird) and whilst I watched it, it tweaked all the centre leaves from a *Tillandsia capitata.* Also sampled were *Tillandsia* 'Eric Knobloch', *Tillandsia streptophylla* and *Tillandsia ehlersiana.* It can only be assumed that the leaves were materials for nest building unless the Sulphur Crested Cockatoos and the Cat Birds destroy just for amusement. It is far from silent spring given all the avian activity in this part of the world and I wouldn't have it any other way.

BOOK REVIEW: BROMELIADS:

A CULTURAL MANUAL

This 38 page booklet was edited by Herb Plever and Joyce Brehm, and is a revised version of the *Cultural Manual* published in 1992. It was published by the Bromeliad Society International in 2003. It can be purchased from that organisation, and Australian distributors, including the Bromeliad Society of Queensland.

The booklet is a brief introduction, from a North American perspective, to bromeliads. It opens with a brief overview of the bromeliad family, and continues with their basic cultural requirements, covering such topics as: light preferences, desired temperature range, watering, air circulation and humidity, potting mixtures, and propagation.

A brief overview is then given of the following genera: Aechmea, Billbergia, Cryptanthus, Dyckia, Guzmania, Neoregelia, Tillandsia, and Vriesea. Other genera which are given a brief mention include: Alcantarea, Bromelia, Hechtia, Nidularium, and Orthophytum. The book concludes with some "Further Reading" suggestions, and a glossary.

There are over 50 colour photographs in the booklet which, by themselves, are worth the booklet's purchase price. Of particular interest to me is the first photograph in the publication. It is a photograph of the infloresence of *Ursulaea tuitensis*, taken by Doug Upton. The plant was grown by Dorothy Cutcliffe. Both are members of the Bromeliad Society of Queensland.

An ideal use for this book is as an inexpensive gift to a friend who has an interest in growing plants, but not necessarily bromeliads (at least until they receive your gift!). If you are looking for a reasonably comprehensive introductory book on growing bromeliads, then a better choice may be either "*Bromeliads for the Contemporary Garden*" or "*Growing Bromeliads*".

Bob Reilly

Bromeliad Tips

The potting mixture in small pots will dry out faster than the same material in larger pots. This means plants in smaller sized pots may (and other factors e.g. plant size, are also relevant here) need watering more frequently, especially in hot weather, than plants in large pots.

Alternatively use a potting mix with a higher proportion of moisture-retaining elements e.g. peat moss, for plants in small pots.

You may consider buying a plant after having seen a colour photograph of it. However, the photograph may not be an accurate reproduction of the plant's actual colour(s). Pinks and blues, especially, often cause problems in this regard.

While there are a range of views on how best to grow bromeliads from seed, one piece of advice is common to all. That is, never cover seeds with soil or other material once you have sown them.

Many *Tillandsias* look best when grown in clumps. However, of oneside of the clump rest against a wall, it is likely to rot over time. So, keep clumps away from walls and periodically rotate them around so all of the plants gain equal access to light, water and nutrients.

In sub-tropical and tropical climates, many bromeliads can be grown in the garden, all year round. Care needs to be taken with the placement of *Aechmeas, Billbergias, Neoregelias, Quensnelias* and the plants of similar genera during summer, especially in December, January and February (in southern coastal Queensland). This arises because the combination of high temperatures and low air humidity can cause leaf "scald" or burn", when the same temperatures combined with high humidity will not. Several hours (on one day) of adverse weather conditions are often all that is needed to cause severe plant damage.

.....

Competition Schedule for 2005

There are Novice, Intermediate and Advanced sections 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: *Billbergia* - 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 sched ule - species and hybrids.
Class 4: Any Other Mature (flowering) Bromeliad - spe cies 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.*

***Note 2.** Class 1 (April), Class 2 (July) and Class 3 (October) provide for plants from these subfamilies not elsewhere included in the Mini Show schedule.*

.....

Bromeliad Tips

Tillandsia seed can germinate, and the atmospheric or grey-leafed *Tillandsias* can grow, on a wide variety of materials. I have a small clump of *Tillandsia schiedana v. major* which germinated and grew on a piece of black shade cloth. It flowered for the first time this year. The clump is growing well and receives fertiliser and water at the same time as the other *Tillandsias* in the shade house.

One way of improving the amount of reflected light within a bushouse is to cover its interior surfaces e.g. walls, with a substance which reflects light. For example, wooden/metal surfaces can be painted a light colour.

Another approach is to cover such surfaces with a light-coloured plastic material. One type of plastic covering is black on one side and white on the other. It comes in rolls and is sold by the lineal metre. The plastic can be "tacked" into position and easily removed when not needed e.g. in summer.

Bromeliaceae is the Journal of the **BROMELIAD SOCIETY OF QUEENSLAND** Inc.
Published bi-monthly
Printed by
ULTRAPRINT Phone 07 3865 5700
Print Post Number: P.P. 434327/0002