Bromeliaceae

VOLUME XXXIX - No. 6 - NOVEMBER/DECEMBER 2005

The Bromeliad Society of Queensland Inc.

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Front Cover: *Tillandsia vicentina* Photo by Ross Stenhouse
Rear Cover : Inca Trail, Peru Photo by Andrew Tremelling

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NOTICE OF THE 2006 ANNUAL GENERAL MEETING

Members are hereby notified that the Annual General Meeting of the Bromeliad Society of Queensland (Inc) will be held on Thursday, 16th of February, 2006, commencing at 8pm in the Uniting Church Hall, 52 Merthyr Road, New Farm.

Business to be conducted will be: The Presidents Report. The Financial Report, Election of Society Officers, Election of the Management Committee, and Election of the Auditor. Nomination forms for positions are available on request from the Secretary. They must reach the Secretary by 5pm 1st February 2006. In the event of insufficient nominations being received for each vacancy, nominations will be called for at the general meeting.

Karen Murday

Secretary

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

INFLUENCE OF GREY-LEAVED TILLANDSIA SPECIES IN HYBRID CROSSES

Author: Bob Reilly

This paper is largely based on Dimmitt (1990), comments from Margaret Paterson, Nev Ryan and other participants at the Bromeliad Society of Queenslands tillandsia workshop in 2002, some observations from Karen Andreas, and feedback at the Bromeliads XIII conference in 2005. **They are also generalisations.** Thus, a particular cross may not exhibit the characteristics which one would expect, based on the observations in this article.

albertiana contributes its growth habit (including size) and petal shape/colour. It appears to be a "dominant" parent in crosses.

albida. "….has a caulescent habit that does not show up in hybrids with acaulescent species, but its very long, thin inflorescence is dominant. Its hybrids have not been winners, but one with *T. streptophylla* is interesting. It looks like a giant, acaulescent *T.albida* (or a white-leafed, non-curly *T.streptophylla*) with a very tall, branched, narrow inflorescence with reddish bracts and pale blue flowers…." Dimmitt (1990) p.121

baileyi. contributes its size, growth habit, and inflorescence shape.

bergeri. contributes its size and growth habit.

brachycaulos. "….contributes soft, green leaves. It also greatly shortens or usually completely suppresses the elongated spike of another parent. The bright red leaves at maturity do not come through well unless the other parent has the same trait…." Dimmitt (1990) p.121

bulbosa. "….with its bulbous base and twisted, awl-shaped leaves (it) is extremely dominant. Nearly all of its hybrids look mostly like it, to the extent that it is difficult to recognise the other parent. It tends to dwarf the inflorescence of hybrids. The trait of red upper leaves at flowering does not come through well…." Dimmitt (1990) p.121

butzii. contributes its growth habit, including size, and branched inflorescence.

capitata. contributes the shape, size and colour of its inflorescence.

concolor. "….transmits stiff leaves and good symmetry of the rosette. The branched spikes and their bright red colour and/or chartreuse bracts are transmitted to offspring very well. Its progeny bloom over an extended period, and the bracts stay colourful for about three months…" Dimmitt (1990) p.121

crocata. contributes its inflorescence's size, shape and petal colour.

didisticha. "….greatly slows the growth of its hybrids, even with *T.stricta*; none are even close to flowering at four years of age…." Dimmitt (1990) p.121

durat. Dimmitt (1990) argued that duratti's size was not evident in its hybrids. This statement is not universally true. For example, Wonga (*durattii x mallemontii*) is much closer in size to *duratii*, than *mallemontii*. Dimmitt stated that *duratii* contributes stiff, succulent, heavily lepidote leaves to its hybrids. This is not universally true e.g. see Wonga and Goomong (*duratii x stricta*) neither of which have succulent –like leaves.

Dimmitt (1990) continues "…Its (duratii) green primary and flower bracts

Continued on page 31

BROMELIADS XIII CONFERENCE REPORT

(by Bob Reilly)

Over 200 people attended the conference. They came from overseas (New Zealand and the United States of America) and from around Australia. The attendance of over 20 people from New Zealand was particularly welcome.

Talks were given at the conference by Australian and overseas speakers.

Bruno Da Silva from Brazil spoke on a range of technically-oriented topics including: Studies in *Ananas* and *Aechmea*, and a revision of the genus *Bromelia.* David Shigii from Hawaii covered several topics including: Hawaiian bromeliad hybridists and their hybrids; and the work of John Arden, a prominent American hybridist.

Andrew Steens from New Zealand gave a presentation on New Zealand bromeliad gardens. Australian speakers and their topics were: Bob Reilly on how to maximise your chances of successfully importing bromeliads into Australia, Olive Trevor discussed some recent bromeliad importations into Queensland, Arno King talked about the genus *Alcantarea,* while John Catlan discussed factors influencing leaf colouration in neoregelias.

The audience appreciated these speakers' presentations. The general view was that there was something for everyone in the presentations, and they presented a wide range of useful information.

Field trips were made to the Roma Street Gardens and the Mt Coot-the Botanic Gardens, the Olive Branch, and Mike Symmons' nursery. All who attended appreciated the wide range of bromeliads on display and the efforts made by everyone at the field trip destinations to make conference delegates welcome.

The bromeliad displays were an impressive feature of the conference. They included displays from individual bromeliad enthusiasts, societies, and commercial growers.

Nev Ryan mounted an excellent tillandsia display featuring clumps of *Tillandsia tectorum, ionantha, ionantha* 'Druid', and *lorentziana.* Bewitching Bromeliads, prepared by Lynn Hudson, had a "witch" theme. As well as witch dolls and black cat figurines, there were guzmanias, vrieseas, tillandsias, billbergias and aechmeas in the display.

Doug Upton and Dorothy Cutcliffe had a lovely display of vrieseas and neoregelias. Of particular interest, were flowering plants of *Vriesea ospinae var. gruberi* and *Neoregelia* 'Johannis de Rolf". Barry and Ann Kable's display featured well grown neoregelias in hanging pots suspended from a galvanised pipe framework. These were "balanced" by a bed of neoregelias, vrieseas, and billbergias.

Andy Stalens had an eye-catching display of flowering *Tillandsia aeranthos, bergeri,* and *schiediana* plants. Shane Zaghini's display consisted of a bed of brightly-coloured neoregelias. I was particularly impressed by the white-centred neoregelias – some of which were pure white, while others had green and pink spots on a white background.

Lyn Grubb's display was centred around a galvanised pipe festooned with hanging pots of neoregelias, while underneath were cryptanthus, which are rarely seen in Queensland. The centrepiece of Cheryl Basic's display was an *Alcantarea imperalis* and an *Aechmea* "Blue Tango'.

Continued on page 30

Oh Gosh $800!

The following extract is from the latest issue of "Brom Watch" published by Rob Smythe in Townsville. The story was reporting on the plant auction at the recent Bromeliads XIII conference.

"A variegated Vr. Red Chestnut went for $800 with very interesting bidding $100, $200, $300, $400, $500, $501, $502,$503,$504,$505,$506,$507,$800.

The auctioneer nearly had a seizure as his wife won the bid. "

I can't help speculating who the auctioneer was. Ed

See a Member's Garden

At the October meeting the call was put out for members who were prepared to have fellow members visit them and look at their garden. These garden owners should be able to answer many of the questions that newer members may have, or simply showin a practical situation how things are done.

If you are prepared to have fellow members pay you a visit, please contact the Society Secretary or the Editor. We are hoping that we end up with a number of volunteers scattered over the SEQ region (and further afield if possible). The names and contact details will be published in a list in each edition of Bromeliaceae.

The first volunteer is:

Nancy Kickbusch, The Gap, Brisbane
Phone (07) 3300 1704

ANNUAL SUBSCRIPTION

Membership fees ($15-Single, $20-Family, $30-Overseas) are due and payable on the 1st January 2006. Prompt payment will greatly assist the Treasurer and Secretary. Members who have not paid their annual fees, will not receive any further copies of *Bromeliaceae* after the January-February 2006 edition.

Karen Murday
Secretary

Photographer's Code

RS : Ross Stenhouse
DU : Doug Upton
RSm: Rob Smythe
BB : Beryl Batchelor
PF: P Franklin
HJ: Hulmet Jesse
DB: Derek Butcher
AT: Andrew Tremelling

Errata

From the Sept/Oct edition of Bromeliaceae

Page 8 - The article titled 'Plant Labels' is by Don Woods, not his son Andrew Woods

Page 14 - caption should read *Vriesea* 'Elfi' not 'Elfin'

Page 33 - Fig 3 - The plant should be captioned *Tillandsia selerlana*

GENERAL MEETINGS are held on the third Thursday of each month except for December, at the Uniting Hall, 52 Merthyr Road, NewFarm, Brisbane, commencing 8 pm.. Classes for beginners commence at 7.30 pm.

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 w.w.w.bromsqueensland.org.au

The Editor's Desk

Being the editor of this journal is a great job. You sure do get a lot of feedback and most is positive, however I have to tell you my hardest critic is myself. As soon as I get my copy of Bromeliaceae through the mail and start to read it, immediately all the mistakes seem so obvious, yet they have been past three proof-readers and myself in the laying out stage. We try very hard to get it right but those errors do seem to slip in and are extremely difficult to eliminate.

The letters to the editor section is a bit bigger than usual this issue and contains a number of interesting contributions. I would like to particularly thank those who made the effort. Its always interesting to read the feature articles, but my gut feel is that most people get a kick out of reading that section. As it develops, my opinion is that people will look at the photographs, read the "Letters to the Editor" and then go on to read the rest of the journal. So please keep the section alive and well by taking the time to drop us a line, email or hard copy is OK.

I would like to remind the reader that the Society has a web site at http://www.bromsqueensland.com. This is still a temporary IP address until the old IP address can be repointed at the new hosting site. Have a look at the site, it changes often!

Apart from the obvious use to members as a source of up to date news, the site also serves the purpose of being a resource that editors of magazines or newsletters can access for stories.

Editors of the smaller societies sometimes struggle to obtain content for their journals. Articles published in this journal are also on the society's web site in a form that makes them easily downloadable (use cut and paste). Images are published in two places, some accompany the articles, others are available in the image gallery.

Editor	Ross Stenhouse
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Mail Out	R & B Pugh
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	Olive Trevor
	Rob Smythe
	Hulmet Jessee
	Margaret Draddy
	Carmel Cullen
	Mike Symmons
	Andrew Tremelling
	Lyn Hudson
	Hulmet Jesse

Bromeliaceae Copy Deadlines

Jan/Feb.....December 5th, 2005
Mar/Apr.....February 5th, 2006
May/June.....April 5th, 2006

Please forward all copy and photographs to:

The Editor, 15 Timbarra Crescent, Jindalee, Qld 4075

Phone: 07 3376 5558 Email: rossjanstenhouse@hotmail.com

Electronic copy RTF or MSWord 7.0 or earlier - Times New Roman

F_1, F_2 and All That

By Peter Peroz

At the September general meeting, there was a lively discussion as to the definition of F_1 and F_2 bromeliad hybrids. My reference in these matters is 'A Dictionary of Biology' by Abercrombie, Hickman & Johnson.

" F_1 (First Filial Generation) The offspring resulting from crossing plants or animals of parental generation (P_1) from which an experiment starts.

F_2 (Second Filial Generation) The offspring resulting from crossing members of the F_1 generation among themselves."

.....

Back Cross. (Usually applied to animal breeding) The crossing of a plant with a plant from an earlier parental generation. (Used to try to intensify a desirable trait)

Reverse (Reciprocal) Cross A cross from the same parents; exchanging the role of seed and pollen parent.

.....

Primary Cross The F_1 generation.

.....

David Benzing, in his book ' The Biology of Bromeliads' has an excellent chapter on bromeliad hybridisation (page 266). Although published in 1980, his comments are still relevant. Recommended reading for a newcomer to bromeliads interested in creating bromeliad hybrids.

Q. (Peter Paroz)

What is the status of crosses between two varieties of a species ?? My understanding is that the progeny would not constitute a hybrid. However under the present naming rules for hybrids, these can be registered with a hybrid name!! Also, I gather that this could apply to a superior specimen selected from a batch of species seedlings. ??

A. (Derek Butcher)

There will always be discussions on seed raising. Although not defined, Benzing suggests that a species is a collection of plants that can reproduce themselves from seed. A variety does the same. But this seems to be ignored by some taxonomists; for example a variety called *variegata*! If a species does not reproduce from seed within the species description, then the plant is a hybrid in my view.

If you have a stable species crossed with any stable species, then it is a primary hybrid or F_1. Remember that some taxa are described as species but are natural hybrids!! All other crossings are secondary F_2, or tertiary F_3 etc. Varieties that are intra-species and are crossed cause a bit of a dilemma but if the progeny are within the species description then surely they should be identified as such. For example how did 'Pickinny' come into being?. If you grow this from self set seed and you don't get seedlings like 'Pickinny' but within *Ae. orlandiana* species description, then surely these are *Ae. orlandiana.*

Cultivar names should only be given if they have features that make them outstanding from the 'normal' species. Variegated plants really stand out but some of the other ones that are given Cultivar names make you wonder if the person really knows the species or are after a quick buck. A cultivar is not necessarily a hybrid but all hybrids are cultivars!

Remember Membership Fees are Due!

MORE ON VARIEGATION

(by Bob Reilly)

In articles which have appeared earlier in 2005 in *Bromeliaceae*, mention was made of several bromeliads which display variable variegation.

The photographs (see page 12) accompanying this article illustratethe first of these plants:

- *Neoregelia* 'Chilli Verde' This plant grows well in garden borders, as well as in pots. The plant's rosette is about 15 cm across. The leaves are a mixture of green and cream in colouration, sprinkled with small red spots. The accompanying photographs show the wide range of variegation in different plants of this hybrid, as well as the variation in variegation between leaves on an individual plant.
- *Vriesea* 'Highway Beauty' This plant's rosette is about 70 cm wide and 30 cm high. Typically, a broad, cream coloured stripe runs length-wise up the centre of each green leaf. However, the variegation pattern in individual leaves can vary significantly from this "standard".

There are many other examples of bromeliads showing variable variegation. While this variation can be very interesting, it is best to see the variegated plant you are buying, if possible, so as to ensure you're getting the bromeliad you really want.

Cultivar: A plant produced in cultivation as opposed to one growing in habitat; a horticultural clone or strain. A plant type within a cultivated species that has recognisably different characteristics.

LIBRARY BOOK REVIEWS: PART 3

(by Bob Reilly)

The Society has an extensive library of books which are available for borrowing by members who attend the monthly meetings. Some of these books are now "out of print", which means you cannot buy a copy (unless you're fortunate enough to obtain a second-hand one).

In this article, two "out of print" books held by the library are reviewed.

Tillandsia by Paul Isley. Published by Botanical Press, Gardena, California in 1987.

The book has 256 pages, over 200 colour photographs, and about 150 black and white photographs and illustrations.

In the book's first chapter, a brief overview is given on how to grow tillandsias. While written from a North American perspective, nearly all of the material is relevant to Queensland's growing conditions.

The second chapter describes about 70 tillandsias and 1 grey-leaved Vriesea (espinosae), in detail. There are usually 2 or 3 colour photographs of each plant, including one showing details of its inflorescence. As only a few of the plants' names have changed since the book was published, most are still accurate.

A description of each plants' appearance (including inflorescence) is provided. As botanical terms are used, some readers may find this material a bit "dry". If you have this view, then the colour photographs are adequate to gain an appreciation of each plant's appearance. The native habitat, and cultural requirements, of each plant are described in non-technical language.

Most of the plants discussed are readi-

ly available in Queensland. Examples include: *aeranthos, albertiana, atroviridipetala, bergeri, brachycaulos, bulbosa, caput-medusae, crocata, cyanea, duratii, fasiculata, ionantha, juncea, paucifolia, pseudobaileyi, schiedeana, stricta, tenuifolia,* and *xiphioides*.

The book then describes, in a summarised form, the contribution of a number of botanists, explorers, and other people to the discovery, classification, and promotion of bromeliads in general, and tillandsias in particular.

The next chapter provides an overview of botanical classification and nomenclature, with a particular emphasis on tillandsias. A particularly useful item is a pronunciation guide to botanical Latin. Such information is useful to all bromeliad growers.

Chapter 6 discusses, in a relatively non-technical manner, aspects of the evolution of tillandsias and their biology. The cultural implications of the tillandsias' biology, for example, for watering requirements, are particularly useful.

This book is a good example of the successful "linking" of scientific information concerning bromeliads, with their cultural requirements.

If you are interested in growing tillandsias, and especially the species described in chapter 2, then this book is well worth reading.

BLOOMING BROMELIADS

The book's authors are Ulrich and Ursula Baensch. This book was published by Ulrich and Ursula Baensch in 1994 through Tropic Beauty Publishers in the Bahamas. While the English edition of this book is "out of print", Spanish and German editions are still available through overseas' distributors. (Also available from them, is a "package" consisting of a booklet containing the English text and the Spanish or German editions).

The book has 272 pages and over 1,000 high-quality photographs. Many of these were taken in the Baenschs' garden, called Tropic Beauty, in the Bahamas.

Blooming Bromeliads opens with a description of Tropic Beauty, followed by short biographies of some of the botanists, explorers and nurserymen who have had a significant "impact" on the bromeliad world. Some of the Baenschs' travels in search of bromeliads in the northern part of South America, and Mexico, are then described.

This test is illustrated by a large number of colour photographs, including ones of some rare bromeliads. An overview of the botanical classification of bromeliads, and their ecology, is then provided.

The main part of the book deals with individual bromeliads. Mainly species, rather than hybrid, are discussed. There is a photograph (sometimes several) of each plant, accompanied by a very brief description of its appearance, natural habitat and, sometimes, other information. About 200 aechmeas are treated in this manner, 33 billbergias, 36 crytanthus, 64 guzmanias, 80 neoregelias, 21 nidulariums, 11 quesnelias, around 120 tillandsias, over 70 vrieseas and more than 150 of other genera.

A chapter on bromeliads' cultural requirements (largely written from a European/North American perspective) then follows. The origin of many bromeliads' names, and a glossary of botanical terms concludes the book.

The material on bromeliads' cultural requirements needs to be treated with some caution, because of the differences between Queensland and European/North American

conditions. Also, the way in which plant photographs are "linked" to the text can be somewhat confusing until one becomes familiar with the approach. Another relatively minor drawback with the book's layout is that plants are not presented in alphabetical order. If you are looking for a particular plant, the easiest way is to look up the book's index, and then refer to the text.

The book's great strength is its many colour photographs. *Blooming Bromeliads* contains photographs of many species which are seldom seen in other publications. For example, the book presents many rare aechmeas, and species from the rarer (in cultivation) genera, such as *Canistrum, Hohenbergia, Pitcairnia, and Portea*. Overall, this book is well worth reading.

2005 SPRING SHOW

(by Bob Reilly)

Over 1,000 people attended the Society's 2005 Spring Show. This was a good result considering the wet (but very welcome!) weather experienced during the event.

The Sunshine Coast Bromeliad Society's display featured alcantareas e.g. *vinicolor*, and *extensa*, and foliage vrieseas e.g. *hieroglyphica*, *gigantea* and *fosteriana*. They were complemented by flowering vrieseas, guzmanias, and neoregelias.

The centre piece of the Gold Coast Succulent and Bromeliad Society's display was formed by canistrums, werahauias, and vrieseas. They were surrounded by aechmeas and neoregelias. Interesting plants included: *Werauhia kupperiana, Pitcairnia burle-marxii,* and *Vriesea* 'Galaxy' (a variegated form of *V. glutinosa*).

In the Society's display, a bromeliad tree was surrounded by billbergias, guzmanias, and aechmeas. In the front of the display, were small guzmanias, cryptanthus, and a spectacular *Neophytum* 'Galactic Warrior'. Other exceptional plants were lovely flowering specimens of *Billbergia alfonsii-johannis* and a variegated *Aechmea marie-reginae*.

Beautiful floral displays of guzmania and vriesea infloresences flanked the Society's display.

Neoregelias are at their best at this time of the year, and their beauty was highlighted in a display of hybrids and species. Some "stand-out" plants for me were: 'Lanarch's Pride', 'Painted Delight', and 'Royal Burgundy x Pink Sensation'.

An innovation for this year was a display of bromeliad photographs organised by Ross Stenhouse. Three people supplied photographs, all of which attracted a lot of interest. There were "portrait" photographs (one of *Pitcairnia smithiorium* was particularly striking), a "mosaic" of bromeliad photographs, and photos of bromeliad trees.

As always, the sales' area drew a lot of interest.

There were over 300 neoregelia species and hybrids on sale. As well as new releases, there were many old favourites. It was good to see a nice selection of nidulariums—perhaps the best range seen in recent years. There was also plenty of flowering vrieseas, and guzmanias, as well as a good range of the popular alcantareas.

Thanks are due to the many people who helped out in various ways on the weekend, as well as the people who supplied plants for the displays and the sales' area. Without their support, events such as these would not happen.

Aechmea 'Lalinda' PF

Aechmea 'Lalinda' PF

Neo. 'Chilli Verde' - Three different plants, three defferent effects. RS

Aechmea 'Lalinda'

by Derek Butcher

In 1994 Len Colgan brought in to a South Australian Society meeting a flowering ***Aechmea ornata* var. *nationalis*. It was the first time we had seen an *Aechmea ornata* in flower in South Australia so it was quite an event. The fact that the plant was variegated led us to accept the fact that the flower head was not up to the usual size and standard we expect from Len .**

So it was a bit of a surprise when Ivy Kirby telephoned and said she had *Aechmea ornata* in flower. We do have a plant called *A. ornata* var. *hoehneana* which had been around in Australia for the previous 20 years or so and origin was unknow, but which is clearly within that *A. gamosepala/cylindrata* group. So I had this in mind while nodding my head and agreeing with everything Ivy said. But then she mentioned vivid red, upright, spiky leaves underneath the blue flower head and I realised perhaps I should not have been so patronising. Subsequent phone calls were received mainly for my wife Margaret but mention was still made of the said plant doing its thing.

Finally on December 15th Ivy got fed up with the lack of action of the Secretary and dumped a complete inflorescence on his desk in his DEN just when he was translating the description of *Tillandsia tephrophylla* from Latin to English. A cockroach jumped out of the inflorescence so papers flew for a short while. Mind you, the inflorescence was post floral, with black bits hanging where the beautiful blue flowers would have been. The long red spiky scape bracts up to 30cm long were still red so it was an impressive 47cm long piece of plant with an 8cm mace on the top!

Ivy had a band-aid on her hand and it was said that her secateurs AND husband Norm were still in the clump of vegetation when she left home. If you have seen Ivy's backyard you'll know what I mean.

So the TRUE *Aechmea ornata* var. *hoehneana* is in South Australia, and I assume Australia, for anyone with the space and inclination to grow it. Oh! I forgot to tell you. The leaves can be over 1 metre long and are stiff with a point on the end.

If you have a smallish plant with floppy leaves about 30cm long, a shortish scape with red floppy bracts 5-6cm long, a cone shaped flower head admittedly with blue flowers but with long red floral bracts with a little whisker at the top (mucro) instead of chunky short green bracts with a really long whisker THEN you ain't got the true *Aechmea ornata* var. *hoehneana*. Your plant is clearly in the Ortgiesia group.

Meanwhile in 1992 Peter Franklin of Raymond Terrace, had obtained a certain *Aechmea lalindei* , now growing under his number PAF1259, from Joe Rigby who in turn had got it from Keith Golinski in Queensland. Peter even sent me photos. Here was my bogus *Aechmea ornata* var. *hoehneana* !! Peter and I were in agreement that the plant just had to be an Ortgiesia close to *A. cylindrata.*

We knew that *Aechmea lalindei* was the old name for a male *Aechmea mariae-reginae* so whoever had identified it as this, was from the 'old' school. How the same plant got two names, admittedly both having cone shaped inflorescences and bluish petals, beggars the imagination. However, we must remember that there was little Bromeliad literature to refer to, in those days.

Neoregelia 'Yellow Devil' DB

Guzmania albarosea HJ

Hohenbergia stellata 'Red' HJ

(See supporting description submitted by Helmut on these two plants - page 17)

Anyway, we convinced Keith Golinski that his plant was one of THOSE *Aechmea cylindrata. Aechmea lalindei* did not appear in the promotional CD for Bromagic in 1997. It was somewhat in limbo because it was an *A. cylindrata* with a distinctive shape and our experience has shown that there are more hybrids in this *Aechmea* subgenus *Ortgiesia* than we had at first realised. We feel that the name 'Lalinda' should be preserved as a Cultivar name.

Neoregelia 'Yellow Devil'

by Derek Butcher

There is a *Neoregelia* being grown in Queensland under the name of 'Sun King' which has reddish stripes on the back of the leaves. Preliminary investigations have revealed that the Cultivar Register 1998 says that 'Sun King' is a form of *N. cruenta* and was used extensively by James Elmore to produce many hybrids. Regrettably we have very few photographic records of Elmore's hybrids to help in identification.

It is said that Grace Goode named *Neoregelia* 'Sun King' for a plant she received from a Chuck in the USA but I know that Grace only names her own hybrids. Let us now look at Shane Zaghini's *Neoregelia* book where he shows a photo of *N. cruenta x corcia* and we know that Shane pays scant attention to spelling. I believe that the Queensland 'Sun King' is the same plant. I had thought that '*corcia*' was a wrong spelling of *coriacea* but I now believe it to be *kautskyi* . Why, I hear you ask! I think the plant came into Australia as *Neoregelia cruenta* 'Sun King' x *kautskyi.* Some reduced the label to read 'Sun King' while others mis-spelt *kautskyi*

If we now refer to this parentage in the on-line Cultivar Register in Cultivar Corner at http://BSI.org we will see:

Neoregelia 'Sun King' – a cultivar of *cruenta*. Very large with broad leaves – yellow in bright light – red tips to leaves – rosette flattens out almost completely at anthesis with inflorescence rising on stalk in center – will easily take full sun in most areas.

Butcher's comment - This sounds like a cultivar of *N. johannis* to me but no photo available.

Neoregelia 'Lucky Strike'. By J Elmore. ('Sun King' x *kautskyi*) Large prolific upright rosette - yellow green in colour with distinctive peppermint red lineations and stripes on the outside of the 4 inch wide leaves - loses striping in bloom as entire plant suffuses coral-red - 12 inches tall and 25 inches across - scarlet-red rounded apiculate tips. Photo by James Elmore held on the Register and shows a flowering plant which is not as dramatic as the description!

Neoregelia 'Yellow Devil' By J Elmore. ('Sun King' x *kautskyi*) Medium upright plant resembling cruenta – upreaching leaves in yellow green with tiny red spots. Photo on the Register is from the 2000 WBC at San Francisco and shows a plant with stripes!

Other Cultivars with same parentage are 'Bonanza', 'Eureka', 'Gold Dust', Golden Nugget', and 'Yukon' none of which are described or photographs available.

To call the Queensland plant *Neoregelia* 'Sun King' is erroneous if only because it seems to be a hybrid rather than a cultivar of a species, and it needs another name. The only description from above that mentions the red lines is 'Lucky Strike'. I believe its overall reddening is cultural and wonder if this would happen to the Queensland plant in some collections.

This matter needs to be resolved and Rob Smythe of Townsville has suggested that the plant looks closest to N. 'Yellow Devil' if only for the yellow green leaves. We know that in the 1980's Pam Koide was offering 'Yellow Devil' and we know that prior to this, the Elmore collection, on James's death, had been purchased by two Californians. This could well be how the plant came to be in California for the World Conference.

I will be noting the Cultivar Register that 'Yellow Devil' can have red stripes to link with the Californian clone. This leaves it clear to call the Australian 'Sun King' by the name 'Yellow Devil' and ask you note your label accordingly .

If you know of any other information regarding this plant or our calculated guess, please let me know or perhaps they could contact: Robert S Smythe **rsmythe@austarnet.com.au**

Why Not Purchase Offsets?

Author: Ross Stenhouse

I pose the question above quite seriously. At a recent society management committee, I heard that there is a rule that says that you must have owned a plant for three months before you can enter it in competitions. Not being a person who goes in for the competitive aspect of bromeliad growing I hadn't really worried about the finer aspects of belonging to the society. Of course, this rule makes a lot of sense because without such a rule you might be getting credit for what is largely someone else's achievement.

This got me thinking - why do people purchase mature plants? Mature plants are established, their appearance and vitality has largely been determined, it's just a case of maintain. With offsets you have the opportunity to exercise greater control over the eventual appearance of the plant. Surely this must be an advantage.

Of course many of us don't enter competitions, we grow bromeliads because of their natural beauty. In many cases the technical challenges of trying to grow a specimen-quality plant are sufficient to maintain our interest. In my case my interest in bromeliads is coupled with a love of taking photographs of the flowers. I am interested in having plants that photograph well. Of course there are only so many images you can take of one plant, so the hunt is always on for new genera, species, and hybrids to photograph. Cost is always a factor because it's not only the cost of the plant, but the cost of the photography as well.

I have observed that mainly the plants are offered for sale when in flower. This offers the purchaser the opportunity of seeing exactly what they are buying. Many offsets look similar when young, making precise plant identification difficult. The old marketing adage of 'sell the steak on the sizzle and not the flavour' seems to be coming into play. In the age of the 10 minute fix, by buying mature plants we are able to establish our gardens quickly without the need to be patient and wait for the plants to grow. This could be yet another reason to buy mature plants.

However, there is another factor that we should look at, and that is cost. Offsets being much younger plants, don't have the same investment in time and effort on the part of the grower. Its reasonable to expect that this reduction in effort is reflected in the purchase price. How often do you find yourself in the position of having a plant that is producing offsets but you don't have

room in your shade house to pot them and grow them on? Why not sell the offsets unpotted or pot a few and sell them at the next society meeting? Put a little marketing expertise into play and download an image off the web, print it out and attach it to the plant as an indication of what the purchaser can expect when the plant matures.

My personal opinion is that pricewise an unpotted offset should be worth about one third the price of a mature plant. Many mature plants sell for around the $8-9 price point at society meetings, so an unpotted offset should sell for maybe $2.50 to $3.00. By selling offsets we are providing a way for members to expand their collections and providing a way for beginners to get started without expending a lot of money. What is your opinion?

HELMUT JESSE'S PLANTS

The following is a contribution sent in by Helmut and relates to two photographs (on page 14) also submitted by the author.

Guzmania albarosea is not a well known species. It was obtained many years ago from 'Forest Drive Nursery'. It's a fairly large plant with a beautiful flower spike in pink and white, flowering every second year and lasting at least four months. The photographed plant was grown in Atherton, North Queensland.

Hohenbergia stellata 'Red' is fairly common and can be fount in most collections. It has a tall single flower spike lasting for many months. After flowering for about 10 years every second year around May, last year it produced five separate flower spikes without any special reason. I wonder if that has been recorded elsewhere? The plant was grown in Atherton, North Queensland.

Folks Like You

submitted by Margaret Draddy

There is a list of folks I know
All written in a book
And every year at Christmas time
I go and take a look
And that is when I realise
That these names are a part,
Not of the book they are written in
But part of my heart.
For each name stands for someone
Who has touched my life sometime
And in that meeting they have become
Etched forever in my mind.
For once you have known someone
The years cannot erase.
The memory of a pleasant word,
Or of a friendly face.
So never think of my Christmas cards
Are just a mere routine
Of names upon a list.
To be forgotten in between
For when I send a Christmas card
That is addressed to you
It is because you are on the list
That I am indebted to
And whether I known you for many years
Or even just a few,
In some ways you have had a part
In shaping the things that I do.
So every year when Christmas comes
I just realise anew
The biggest gift that God can give,
Is knowing folks like you.

Adventitious: Produced out of unusual or abnormal places, such as some roots or buds, or from stems or leaves. Often used in connection with offsets from broms such as *Alcantarea extensa*. Normal offsets are usually produced after flowering

Neoregelia ‘Hugo’ RSm

Neoregelia ‘Gee Whiz’ RSm

Neo. 'Two Tone x Perfection' RSm

Neo. 'Serendipity Girl' RSm

Neoregelia concentrica and it's Hybrids

Special interest — the large banded Neos.

by Rob Smythe

I will restrict this article to those plants found in my own garden as otherwise the article could be too long. For most of the plants discussed, I have supplied photos to the editor. It would be unlikely that he will find room for all of these. Missing ones can be seen on the fcbs site [1].

Neoregelia concentrica can be identified by most growers on sight though this won't be so easy in the future with so many variegated crosses reverting to the non-variegated forms e.g .*Neo* 'Bruiser', *Neo*. 'Flesh' and *Neo*.'Chirripo'. *Neo*. 'Bruiser' is a very moody plant producing great variation in its variegates. The non variegated sports are already easily mistaken, in my garden, for concentrica. Growers accept the variations in this species but for some mystical reason, I still hear growers arguing on correct pronunciation. Is it pronounced concentric-a, just as you say concentric circles or is it pronounced concen-TRIC-a with emphasis on the TRIC? There is no argument both pronunciations are correct . As we are English speaking we prefer the first pronunciation. If we were non English speaking the Latin type pronunciation would most likely be preferred.

My description of *concentrica* is that it usually has very thick leaves, moderately large black spines and is a rather flat plant. It can have excellent shape or can be quite open towards the centre. It obviously has lots of concentric rings. The leaf is a little unusual in that it has a rather flat blade which curves dramatically upwards on either side as it approach the base. Try this out with a strip of paper. You will find the blade kinks and points downward. This is the reason why many neoregelias are so flat. In the better forms of concentrica the turned up area is short so all the blades pack closely giving the plant a very attractive and full appearance. One of the best marked and shaped neos in my garden is *Neo.* 'Hugo' a clone of *concentrica*. Unfortunately in the tropics this species is reluctant to flower and I don't have the inclination to destroy its meristem with a screw driver, so pups are as infrequent as one in five years. We do grow very large plants as a consequence. One of my *Neo . concentrica* plants is 80 cm across. *Neo.* 'Monty'[1] is another exciting concentrica clone that just appeared as a sport in my garden . The sport was on the type form of *Neo.concentrica.* It can grow with every leaf coming out pure white. Who said there were no albino bromeliads that survive? One of my two plants gets some very narrow ribbons of green while the other has pure white leaves. Why does this alba survive while others die? The answer can be seen in your own garden. Look at your variegated forms of *Neo. concentrica* and you will see the white variegations disappear as the plant's leaves age. The white areas go green allowing enhanced photosynthesis. The same happens with 'Monty'. With 'Monty' this presents a problem as two of the three pups did not develop green in the older leaves quick enough to survive. We are lucky in Townsville to have probably the highest light levels in coastal Australia. Putting together daylight hours and intensity of light I think we win hands down. Maybe the intensity of light has no bearing as broms have a limit to how much light they can process in a day. This is called 'Saturation Point' and means that if there is more light than is needed to process the intake of carbon dioxide it is wasted. This

Neoregelia 'Iris' RSm

Neoregelia 'Camelot' RSm

Neoregelia 'Beetroot' RSm

Neoregelia 'Isabel Sport' RSm

gardening success is offset by Townsville also having the highest skin cancer incidence in the world.

Using exclusively *Neo concentrica* with *Neoregelia carolinae* as parents, we get variegates which do not lose variegations with age. This is a sure way of separating a true variegated *N. concentrica* from a look alike hybrid. Some of these crosses are very flat e.g. *Neo.*'Chirripo' (50% *concentrica*) while some are not flat e.g. *Neo.* 'Flesh' (75% *concentrica*). By % I mean % parentage rather than % genetics. With primary crosses there is no difference in these terms but with complex crosses breeders like myself line breed. We are looking for special characteristics which may come primarily from one parent. Say for example we selfed *Neo.* 'Chirripo'. We still have involved only the two species equally but we can theoretically predict, that a seedling could be 100 % *concentrica* . Actually one chance in 2^{26} which is one chance in 67 million. This would be line breeding to the extreme i.e. chasing a pure concentrica. Usually we would be looking for plants like concentrica with added features from the second parent.

When making a cross, understanding the breeding of the parents can help but wrong registration or incorrectly labelled plants can cause problems. Look for example, *Neo.* 'Chirripo' has one form, found in collections which is heavily spotted. It is registered as a primary cross between *Neo. carolinae* and *Neo. concentrica*. I believe the plant shown on fcbs without spots (photo by Skotak the breeder) has to be the true 'Chirripo ', and is not the same as the spotted 'Chirripo' in many of our collections. The spotted form I believe would have the same parentage as Neo.'Cherry Jam' i.e . *Neo. carolinae* x *marmorata concentrica* so really it should have its own name. I now call my spotted Neo.'Chirripo'— *Neo.* 'Cherry Jam2'. Have a look at my photo supplied. N. 'Chirripo' is the one on the right hand side. No one will convince me that it is a primary cross between Neo. *concentrica* and Neo. carolinae. Like Neo. 'Cherry Jam' beside it, it must have Neo. *marmorata* in it's makeup to provide the spots. It's only human nature to mix up tags. You might find this hard to believe but I saw a whole nursery (not broms) blown away in a cyclone. Next week the hundreds of seedlings were all back in lines with labels in place. It does help to know what you are working with but I do remember one excellent American breeder saying, "Well if you want a green flowered plant it often comes down to trying crossing a yellow with a blue." I am sure this was tongue in cheek as understanding anthocyanin (colour) production in plants is quite different to 'paint box' methods. A classical example is in the family Orchidacae where there is a species where you can take one plant, self it and all progeny are white. Take another plant of the same species self it and all progeny are white also. Cross any of the first set of seedlings with any one of the second set and all progeny are coloured lavender-blue. Two things can be learnt from this. Firstly same species don't all have the same genotype. Two, you need two different genes to be present to develop colour. For the plants mentioned above each of the original plants had two sets of one of the two sets required for colour production. Knowing this I can never understand why bromeliad taxonomists insist on using flower colours to separate some species.

***Neoregelia* 'Hugo'**

This stunning plant precipitated my

writing of this article. This is the most beautiful clone of *Neo. concentrica* that I have seen. Note the sharp markings and the wide flat blades. In the north unfortunately it is a bit of a collectors item. I don't think it is well known outside the north.

***Neoregelia* 'Decora' [1]**

This is a primary hybrid between *Neo. concentrica* and *Neo. princeps*, the latter is the usual source of lavender genes. *Neo.* 'Decora' has been grown for years in Townsville and always was seen as a concolour lavender after the ilk of princeps. I shocked everyone after realizing it was a concentrica hybrid and grew this delicate plant in full sun. It became a very strongly barred plant. My photo on fcbs shows bars just starting to form.

***Neo*. Lost in Space [1], *Neo*. Champers [1] and *Neo* Iris**

Neo. carolinae x concentrica xx Painted Lady xxx self is the formula for the last two. I have registered the parent of these two as *Neoregelia* 'Lost in Space' and the two selfings are *Neo.* 'Champers' and *Neo.* 'Iris' as indicated. Wonder of wonders, I can say I have bred 'Iris' one of the best neos I have ever seen. By diluting the concentrica with small amounts of foreign coloured species like *Neo. farinosa, Neo. chlorosticta* and *Neo. johannis*, the concentric bars have been reinforced and these are present in an unbelievably symmetric, sharp and narrow form. Lovely pink markings have also appeared.

I would like to diverge here and make a plea for growers to stop referring to F_2 crosses. This terminology is one of my pet hates. You will have clearly noticed I said 'selfing' above. Why is this so difficult to write? F_2 jargon is most useful for simplifying explanation of Mendel's ground breaking studies in genetics but is too ambiguous for current hybridists to use. It does not tell us what cross was actually done. Most people think it just means selfing. The easiest thing for me to do is give examples.

Let me define P_1 as the single parent (used in the selfing) as being *Neo*. 'Lost in Space' see above. This selfing of *Neo.* 'Lost in Space' delivered four interesting plants which I have kept. This is the F_1 generation. One of these is *Neo*. Champers. Now say I breed on with this and record my new plant as *Neo*. Champers F_2. What cross have I actually done ? The possibilities are:

#1 *Neo.*. Champers x Neo Champers
#2 *Neo.* Champers x Neo. Iris
#3 *Neo.* Champers x Unnamed sibling #1
#4 *Neo*. Champers x Unnamed sibling #2

Confused? Some authors even accept a back cross to the parent/s as an F_2 cross.

#5 *Neo*. Champers x *Neo.* Lost in space
#6 *Neo.* Champers x (a second parent if it had one)

I have seen even broader interpretation than this but I won't take you down this road other than to say it allows *Neo*. Champers x unknown to be included. Note another important feature, I have stated my P parent. How many times before have you seen an F 2 assignment with its P assignment given? I would guess never. This means that I could have registered my cross not as

Neo. Champers F_2 but as Neo. Champers F_3 with P1 and P_2 being the parents of *Neo*. Lost in Space.

Please give up this practice. Confused enough ? There is more. Do we read into *Neo*. Champers F_2 as being a member of the second filial population of *Neo*. Champers or is it as being a member of the second filial generation on *Neo*. 'Lost in Space'. You may or may not be surprised to know that it is usually the latter.

While I have my technical hat on let me discuss the terms "grex" and "cross" using examples. People who have grown orchids and then broms get these terribly messed up. Orchids are named by their grex while broms are named by their clone. I won't confuse you further with this but show by examples. You cross a plant in your yard and it is called a "cross". A person in England crosses two plants and they have done a "cross". If both people were using the same plants with the same clonal names there is no difference to doing the same cross a second time on your plant or doing it in England so crossing clones you always have a "cross". We usually sow more than one pod in the tray anyway. Confused? Well now say you were both crossing the plants with one or both parents existing as a species, everything stays the same except for the last step above.

The combination of your seedlings and the overseas seedlings form a swarm which is now correctly known as a "grex". Why the difference? Clones of the same plant all have the same genotype while species are a cluster of closely related individuals of different genotypes which are distinct from any other species. So, the species in England, though having the same name is different enough to give off springs which you can't match with your crossing. So speaking collectively we have two different limitations on plant populations and so this collective equivalent of 'cross' is 'grex'. The two "crosses" now are collectively called a "grex". Note: species like *Neo. concentrica* 'Hugo' are registered as clones and the correct name is *Neo*. 'Hugo'. They follow the clone rules. Prefer some rules!?

#1 Any individual cross stays as "cross".

#2 Lumping your crosses with nominally the same cross done by others.

a) still called a "cross" if clones are used exclusively.

b) called a 'grex' if species (not registered as clones) are used.

#3 If in doubt call it a "cross". You will more than likely be right. "Grex" is often just fancy talk anyway.

After all that some people will say that the term "grex" is just a collective term for the term "cross". I say why use it where it means nothing different to 'cross'?

Neo Beetroot

Neo. concentrica x *Neo. carolinae* x x *concentrica* x (*melanodonta* x *concentrica*) this cross is very close to that of *Neo.* 'Flesh' [1]. All we would have to do to make it into *Neo.* 'Flesh' is to replace melanodonta with concentrica. Has anyone been able to tell the difference between concentrica and melanodonta? I can't but I have heard it said our (Aussie) melanodonta plants are just dark concentricas.

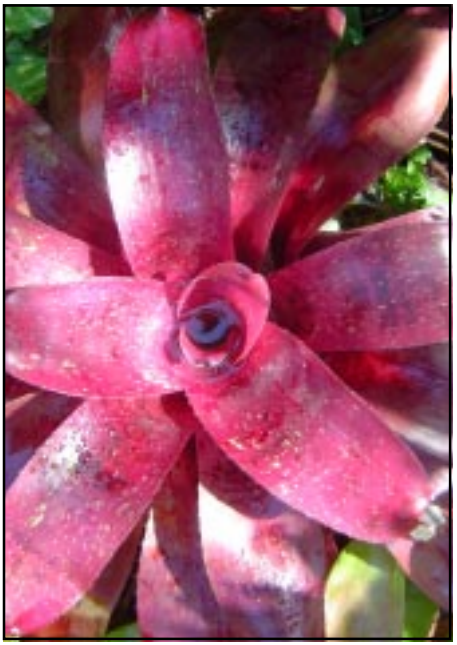
There is a song 'What a difference a day makes' well a few different genes has make a world of difference here. I have registered four plants of the stated melanodonta cross. These are *Neo.* 'Beetroot' (having none to few variegations) and its sport *Neo.* 'Serendipity Girl' (wide central band of variegations), Neo. 'Screw Ball' and *Neo*. 'Cordite'. These are massive and strikingly highly marked plants not a bit like the green and white *Neo*. ' Flesh'.

***Neoregelia* 'Stars and Bars'**

Neo. concentrica x *cruenta* This is an excellent plant looks good, bars strong and pups like mad. Beginners, take note as it is a better option than waiting for ever for *Neoregelia* 'Hugo'.

Neo. 'Gee Whiz': You may well ask, 'Where do the bars come from?' There is

Neoregelia 'Roy's Special'



Neoregelia 'Proud Flesh' RSm

no *Neo. concentrica* in its formula. I'm not going to suggest it is coming from the barring found on the reverse side of the leaf in all three of its registered ancestors namely *Neo cruenta*, Neo *spectabilis* and *Neo fosteriana*.

My argument is that *Neo.* cruenta is such a dominant parent that many of its hybrids look near identical to cruenta and could be mistaken as cruenta by the hybridist. I have a *Neo.* cruenta?— that looks like all the others but close inspection shows spotting on the underside. This maybe why no one has registered the obvious *Neo. cruenta* x *marmorata* cross.

There are a great number of *Neo.* cruenta clones around. One I saw recently which I was told has been widely used in hybridizing is obviously a hybrid with *Neo. concentrica*. So maybe we should not base too much on the hybrid's formula. Let us now keep looking at pictures where make up of the plants is uncertain.

***Neoregelia* 'Roy's Special'**

Neo. 'Meyendorffii' x *concentrica*. One of our gems. It has Neo. *concentrica* shape and size but blushes with the Meyendorffii influence. The bars are nearly washed out. Look closely at the centre.

***Neo*. 'Two Tone' x 'Perfection'**

This is a seedling from Allan Freeman's stable, just starting to colour up and as yet not named but is showing promise.

***Neoregelia* 'Isabel' (sport)**

Another beauty. Though the parents are known the geniality of the parents is not clear but I would assume *N. concentrica* was in there somewhere.

The Hot Shots:

This is what I call my group of very large neoregelias (see photo). They all are over 70 cm across. These are all concentrica or concentrica's hybrids except for the greenish plant which is *Neo.* 'DeRolf'.

***Neoregelia* 'Camelot'**

One to sneak in. I would not consider this a large growing plant but I will show it because something unusual happens. Grown in the shade it grows broadly barred as shown but something relatively usual happens. Up here in the tropics, with high light intensity these unusually thick bars disappear. The plant reverts to look like its second parent, the usually concolour red *Neo.* 'Avalon'. I am cheating a bit here as N. 'Avalon' does behave similarly as does *Neo.* 'Bob and Grace' as well as *Neo.* 'Lambert's Pride'.

This ability to turn the genes on and off depending on the environment, though common with broms I have only experienced it once before with other plant families. I had an orchid named Phal. Pago Pago that had yellowish flowers when flowering at the time of its yellow parent's flowering time and pinkish when flowering at its pink parents flowering time. Try growing *Neo.* 'Marble Snow' in full sun. I accidentally put mine on the sales table as *Neo.* 'Marble Throat' (a diminutive parent). Had to claim it back quickly as then it was rare and a treasured gift from a friend.

Finally a list of other barred 'you beauts' in my garden.

Neo. 'Teine Samoa' , *Neo*.. 'Samoan Chief', *Neo.* 'A Perfect Ten', *Neo.* 'Two Tone' and *Neo.* 'Cliff Siverd'.

I will concluded by saying that I am not trying to suggest all *Neo. concentrica* hybrids are all banded. When you cross them with dominant plants like *Neo.* 'Fireball' bands may not be obvious. Worth a try in full sun though. How many plants will behave like *Neo.* 'Decora' I could not guess ?

1. http://fcbs.org/pictures.htm

Neo. 'Pink Floss' DU

Neo. 'Movie Star' DU

Neo. 'Movie Star' DU

Neo. 'Kings Ransom' DU

Neo. 'Tossed Salad' DU

Neo. 'Sister Grace' DU

Neo. ‘One & Only’ DU

U

Neo. ‘Sam Smith’ DU

Neo. 'Bobby Dazzler' DU

T. punctulata Schltdl. & Cham.

by Peter Paroz

Tillandsia punctulata is a small green leafed species occurring in cool, shady, moist areas in Central America with collections reported from Costa Rica, Belize ,Honduras, Mexico, Nicaragua and Panama. The numerous offsets grow on short stolons to about 4cm. The plant forms clumps readily and rarely flowers as a single specimen. The flower head is spectacular; a simple or branched, inflated spike, with red primary bracts, secondary bracts green in colour, with purple petals white tipped, the stigma and anthers exerted.

The plant shown was growing in a flat 80 x 300 mm terracotta dish. The 'growing' medium was diatomite* granules (ungraded approx 4 to 12 mm). I have experimented with this as a growing medium for a number of bromeliads especially epiphytes where root aeration over an extended time is important. Since the diatomite provides no nutrients (silicon is yet to be proven to be an essential element for bromeliads), I make a regular application at low strength of a liquid fertilizer. The pot is soaked in a bucket to allow absorption by the granules; supplemented by a light spray over the foliage. The fertilizer I am currently using is Phostrogen, 14:4.6:22.5:0.5:1.3 (N. P. K. Ca. Mg); with an occasional boost of the calcium and magnesium content. This latter may well be unnecessary as Brisbane town water regularly has adequate amounts of these elements.

T. punctulata will grow readily in a shade house but if grown too shady, the bract colour may not develop fully. An earlier single flowering in a bush house (50% Sarlon) produced a disappointing show of bract colour; and was castigated by the judge at the BSQ meeting. Despite the collections being recorded from 'shady' areas, the plant in the photo has been acclimatised to full sun to maximise bract colour for this clone. This clump has been grown in full sun for the last three years - approx eight hours in summer and five in winter; with bright shade for the remainder of the day.

Photos available on the net show only a little variation in the plant colours at the time of flowering

A hybrid with *T. standleyii* seems to retain most of the punctulata colour in the flower head. The rachis appears intermediate between the parents and semi recurved. Other plant characteristics were not apparent from the photo.

(* Diatomite is the soft porous rock composed of the silica skeletons of diatoms growing in fresh water lakes millions of years ago)

Shortly after the photos were taken, the plant 'fell apart'. The old stolons had decayed; the flower heads made the plants top-heavy and a little vibration in transport was the last straw. The centre of the clump showed a lot of decaying leaves indicating that these plants were not drying out between waterings. This is a problem in trying to grow super large specimen clumps. I had the same situation many years ago with a very large clump (40+ inflorescences) of *Tillandsia stricta*.

Punctulata: Minutely spotted; spotted.

Stolon: A shoot that bends to the ground and takes root; more commonly, a horizontal stem at or below the surface of the ground that gives rise of a new plant at its tip

Stricta: Upright; Erect; very straight.

Tillandsia punctulata DU

Tillandsia punctulata RS

Tillandsia punctulata RS

Continued from page 5

They were surrounded by many brightly-coloured neoregelias, a large number of which were new hybrids.

Gwen and Doug Parkinson's display had a strong water/frog theme. This theme was supported by flowering guzmanias, vrieseas and aechmeas, while tillandsias "framed" two sculptures with a frog "orientation".

There were wall poster "displays" from Totara Waters and the Northern Territory Bromeliad Study Group.

The Gold Coast Succulent and Bromeliad Society's display had a wide range of well grown plants from many genera. Plants which impressed me included: *Dyckia brevifolia*, 'Warren' (chocolate); *Encholirium* sp.; *Pitcairnia andreana; Nidumea* 'Midnight'; *Neoregelia* 'Zulu', 'Blushing Tiger; and *Hechtia tillandsioidies.*

The centrepiece of the Bromeliad Society of Queensland's display was a steel "tree" with arching limbs and "flower pods" which had plants of *Vriesea fosteriana* in them. Spanish moss draped over the tree, provided an effective contrast to the tree's black colouration. Underneath the tree was a sea of large vrieseas, alcantareas, and flowering guzmanias. In the front of the display were brightly coloured neoregelias, with the centrepiece being a large clump of *Quesnelia* 'Tim Plowman'. Once again, Bob Cross and his helpers had excelled themselves.

Alcantareas and a *Werauhia sanguinolenta* var. *rubra* plant formed the centrepiece of the Sunshine Coast Bromeliad Society's display. They were surrounded by neoregelias, guzmanias and vrieseas. An impressive plant was an *Alcantarea glaziouna* coming into flower.

The Olive Branch had a very colourful display of flowering vrieseas and guzmanias, interspersed with brightly coloured neoregelias and billbergias. Its centrepiece was a large bowl of vriesea and guzmania infloresences, surrounded by miniature variegated neoregelias.

Robert and Melissa Dilling's display featured many beautifully grown plants, contrasted "against" a layer of black and white pebbles. The display's centrepiece was an *Alcantarea imperalis* 'rubra'.

The Brisbane Bromeliad Centre had a nice display of flowering guzmanias, framed by clumps of neoregelias and *Vriesea racinae.* Well established clumps of tillandsias e.g. *latifolia, ionantha* and *tectorum,* were secured to a "rock" backdrop. An impressive audio/slide presentation completed their display.

The plant competition was well supported and is covered in a separate article.

Over ten sellers provided a wide range of plants for people to purchase. Many of these plants are not seen at Society shows or monthly meetings. Most people went away from the conference with new, prized, additions to their collections.

The conference concluded with a presentation by the hosts of the Bromeliad XIV conference. It will be hosted by the Bromeliad Society of Australia in Sydney in November 2007. The Bromeliad Society of Queensland made a $500 donation to assist with fundraising for that event.

8 December Society's Christmas party. There will be a free barbecue and monster bromeliad raffle. Join with other Society members in celebrating the festive season. Commences 7pm, at Uniting Church Hall, 52 Merthyr Road, New Farm.

Continued from page 4

are quite dominant in the progeny. In two crosses with species in other subgenera (*T. meridonalis* and *T.gardneri*) the plants have been very beautiful, but the inflorescences have been abortive and without flowers. Hybrids with *T.stricta* produce small, few-branched spikes with some color in the flower bracts, and small, dark blue flowers. A few clones have very large , many-branched inflorescences with small but deep purple flower bracts. A cross with *T.cacticola* looks like a giant succulent cacticola; the first spikes are appearing and are very large…." (p.121)

edithae. does not appear to be a dominant parent in its hybrids

exserta. typically contributes the size and shape of its inflorescence

fasiculata will often contribute its numerous-leaved habit, multi-branched inflorescence, and relatively vigorous "pupping," traits.

flabellata. contributes its size, growth habit and inflorescence size/shape

intermedia. contributes its elongated form, and few leaves to most of its hybrids.

ionantha. "….dwarfs the size of its hybrids and greatly shortens or, more often eliminates the elongated spike of the other parent. The red leaves at maturity do not come through unless the other parent had the same trait…." Dimmitt (1990) p.121. However the *ionantha* cultivar known as "Druid" does not appear to transmit its inflorescence/petal colour to its offspring.

ixioides. "….contributes stiff, lepidote leaves. The green flower bract colour is very dominant. The yellow flower colour is transmitted if the other parent has white flowers. Crossed with blue flowers, the result is dirty-brown flowers i.e. with *T.stricta*…." Dimmitt (1990) p.121

mallemontii. contributes its growth habit, but not necessarily its size.

pseudobaileyi. "….like *T.bulbosa*, is heavily dominant. Hybrids have bulbous bases, twisted awl-shaped leaves, and frequently faint striations on the foliage. It contributes a large, branched inflorescence…." Dimmitt (1990) p.121

recurvifolia.(Following are Dimmitt's comments for *meridonalis* which is a synonym for *recurvifolia*) "….contributes stiff, lepidote leaves and fairly vigorous growth, through not as fast as *T.stricta.* The white flower color dilutes the color of the other parent in the progeny…." Dimmittt (1990) p.122

rothii contributes the shape and colouration of its inflorescence and the red "hue" which its leaves assume at flowering e.g. see Belli (*rothii x exserta*).

schiediana often contributes its "two tone" petal colour to its progeny's flowers.

streptocarpa. contributes its growth habit (but not necessarily its size), inflorescence shape/size and petal colours.

streptophylla. "….transmits its large size and very large , well branched spike to almost all of its hybrids. Some hybrid progeny also have twisted leaves…." Dimmitt (1990) p 122. However from my observations *streptophyllou* usually imparts its form to its progeny.

stricta. "….contributes its rapid growth more than anything else, including its short-lived blooming habit. The pink flower bracts and blue flower colour are greatly suppressed when crossing with green-bracted or white flowered species…." Dimmitt (1990) p.122. However *stricta* also appears to often transmit its growth habit and size

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SOME MEDIUM-SIZED NEOREGELIAS

(by Bob Reilly)

Neoregelias are probably the most popular bromeliads amongst Queensland collectors. In this article, 40 medium size neoregelias are described, although there are, literally, hundreds more to choose from. For the purposes of this article, I have used a plant width, at maturity, of 30 to 70cm to define a "medium sized" neoregelia.

The plants are mainly grown for their foliage, as the inflorescence usually consists of a cluster of blue or white petalled flowers, in the middle of the plant's "tank". The tanks are formed by the plants' central leaves. They store water which helps the plants to meet their moisture requirements.

Neoregelias typically have a flat rosette formed by 15 to 30 leaves, all of which have small spines on their margins. Many of the neoregelias grown today have attractively – marked and coloured foliage throughout their life. This colouration often becomes more intense at flowering, when the plant's central portion often "colours up" in shades of pink, purple, or red.

Neoregelias grow well in pots, or small buckets. The containers should have a diameter of 150 to 200mm. Potting mixtures used successfully include:

- Well composted pine bark to which a continuous release, over a period of nine months or more, fertiliser such as Nutricote or Osmocote is added when the plants/pups are potted;
- Pine bark chunks, (such as those used to grow cymbidium orchids in), treated with a special type of fertiliser available from the Bromeliad Society of Queensland. Combine 1 part charcoal with 7 parts treated bark to form this potting mixture;
- A mixture of 2 parts Peatmoss or Cocopeat combined with 1 part coarse sand. Add Nutricote or Osmocote to this mixture.

Care should be taken in applying liquid fertiliser, as excessive fertilisation results in the plants losing their symmetrical shape and, to some extent, their colouration. If applying liquid fertilisers, a brand such as Phostrogen (N:P:K ratio is 14 : 4.4 : 22.5), which has relatively low amounts of nitrogen in it, may give the best results.

These plants grow well under 50% "density" shadecloth in Autumn, Winter, and early Spring and 75% shadecloth for the remainder of the year. Alternatively, they will grow quite well in shaded positions in the garden, but it is important to avoid locations which receive the full afternoon sun (especially in summer). Neoregelias look very attractive in massed plantings and, as such, make good landscaping plants provided their shade and water requirements are met. The plants like air movement around them. So, if practical, space plants so the edges of their outer leaves are only just touching.

The only pest likely to cause some problems is scale. This can be treated by using an insecticide such as Folimat. Avoid spraying the plants when the temperature exceeds 30 degrees Celsius, otherwise leaf "burning" may occur (although such incidents are rare).

These plants readily produce pups which will produce flowering plants in 12 to 24 months time.

Pups can be potted straight into any of the potting mixtures described previously. Ensure the mixture holds the pups firmly in position, as this helps promote rapid growth.

Neo. 'Aussie Dream' DU

Neo. 'Gee Whiz' DU

Neo. 'Phyllis' DU

Most of the plants described below are readily available from bromeliad nurseries and Society members. Also there are many other fine neoregelias which, due to space constraints, I have not described here.

The plant descriptions, and photographs used to illustrate some of them, are based on flowering southern Queensland plants grown in southern Queensland under the conditions outlined in the earlier part of this article. The amount of light received in different parts of Australia can vary considerably. For example, certain neoregelias grown in North Queensland under 70% shadecloth can look quite different to the same plant grown in southern Queensland.

The naming of neoregelias, particularly hybrids, can be something of a vexed topic. This arises as many hybrids in particular, have not been formally registered or, in some cases, appear to have been registered under two different names. While people such as Derek Butcher, the Bromeliad Society International's Cultivar Registrar, are endeavouring to rectify this situation, it will continue for some time. So, the approach I have adopted in this article, is to use the name under which the particular plant is generally sold in southern Queensland.

'American Stars and Bars' – About fifteen 10cm.-wide leaves form a 45cm wide, flat rosette. The green leaves have dark purple barring and splotches of varying sizes. At flowering, the centre becomes dark pink-purple in colour.

'Aussie Dream' - About twenty 4cm.-wide leaves form a flat rosette about 40cm wide. The green leaves, which have white stripes of varying widths, colour orange in good light. The plant's centre flushes a bright orange-red at flowering.

'Aussie Dream' "April" - About twenty 7cm.-wide leaves form a 40cm wide, flat, compact rosette. The green leaves have thin white margins, and pronounced purple tips. At flowering, the centre flushes a pink-purple.

'Aussie Dream' "Superba" – About fifteen 7cm.-wide leaves form a 50cm wide flat rosette. The leaves' centres have a large number of creamy stripes of varying widths. The leaves' margins are green. At flowering, the plant's centre becomes a dark pink-purple, while the upper leaves acquire a light pink shading.

'Bobby Dazzler' – About twenty 8cm.-wide leaves form a 60cm wide flat, open rosette. The leaves are red-brown in colour with green splotches, especially towards the plants centre.

***carolinae v tricolor* 'Perfecta'** - Perhaps the best of the *carolinae v tricolor* cultivars. About twenty 5cm.-wide, leaves for a flat, open rosette about 60cm across. The green leaves, which have a pinkish hue in good light, have central, white stripes of varying widths. The centre flushes a bright pink-red at flowering.

'Charm' – About twenty 8cm.-wide, leaves form a compact rosette about 70cm across. The red leaves have a large number of small, green spots which can "fade" and disappear when the plant is exposed to strong light. The leaves' tips are a pronounced maroon colour.

'Cherry Jam' – About fifteen 8cm.-wide leaves form a 50cm.-wide flat, open rosette. The leaves' margins are green, with the balance largely composed of cream stripes of varying widths. At flowering, the centre flushes a deep purple.

'Colour Parade' – About twenty 6cm.-wide leaves form a semi-erect rosette about 50cm. wide. The predominantly yellow-green leaves have reddish brown bands of vary ing widths. These bands have green

Neo. ‘Gunpowder’ DU

Neo ‘Waipio Valley’ DU

Neo. ‘Cherry Jam’ DU

spots and splotches in them.

concentrica v albomarginata – About fifteen, 7cm.-wide leaves form a 40cm.-wide flat rosette. The green leaves have thin, white margins and purple splotches. At flowering, the centre flushes a violet-purple

***concentrica* x 'Avalon'** - About thirty 5cm .-wide leaves form a semi-erect rosette about 60cm across. The reddish-brown leaves have green splotches scattered along them. Greenish bands, of varying widths, are evident towards the plant's centre.

'Dantes Peak' – About fifteen 9cm.-wide, leaves form a 40cm.-wide flat rosette. The green leaves have a large number of thin, irregular, purple bands. At flowering, the central "half" of the plant flushes a deep violet-purple.

'Enchantment' "vareigata" – About twenty 7cm.-wide leaves form a 60cm.-wide flat rosette. The central portions of the pink flushed leaves have cream stripes of varying widths. Small, white spots are scattered over the leaves. At flowering, the plant's centre flushes red.

'Fosperior's Perfection' - This is a variegated form of N. 'Fosperior'. About fifteen 5cm wide leaves form an open, 70cm.-wide rosette. In good light, the leaves are light crimson in colour, tending towards green in shady conditions. At flowering, the crimson leaf colouration becomes more intense, while the plant's centre turns a bright red.

'Gee Whiz' – About fifteen 10cm.- wide leaves form a flat rosette about 60cm. across. The leaves have dark purple spots and fragmented banding. The ends of the leaves are red-purple, with a pronounced purple spot at each leaf's tip. At flowering, the plant's centre flushes pink-purple in colour.

'Grace' x 'Passion' – About twenty 7cm.-wide leaves form a flat rosette about 40cm across. The bronze-green leaves turn a deeper shade of bronze at flowering, while the plant's centre flushes a bright pink-purple.

'Gunpowder' - About twenty 7cm.-wide leaves form a 60cm wide rosette. The leaves' margins are green, with the balance having cream stripes of varying widths. At flowering, the plants upper leaves are suffused with violet-purple, while the centre flushes a deeper violet-purple.

'Heck' – About thirty 5cm.-wide leaves form a flat compact rosette about 30cm wide. The bronze-green leaves have 1cm wide, white margins. At flowering, the plant's centre flushes red, and a reddish tinge becomes evident in the leaves' white margins.

'Impressor' – About twenty 6cm.-wide leaves form a semi-erect rosette around 55cm. across. The white margined, green leaves have an "overlay" of reddish blotches and fragmented bands. At flowering the reddish markings become more pronounced, particularly in the plants centre.

'King's Ransom' – About twenty-five leaves form a compact rosette about 50cm across. At flowering, the plan's centre is a bright red, progressing through pink and then bronze – green colours, as one moves towards the leaves' tips.

'Lambert's Pride' – About twenty 6cm.-wide, leaves form a compact rosette about 50cm. across. The red-brown leaves have green bands of varying widths. A light reddish flush appears in the plant's centre at flowering.

'Len's Choice' – About fifteen 6cm.-wide leaves form a flat, open rosette about 70cm. across. The green leaves have irregular purple markings, and faintly flush pur-

ple in good light. The leaves' margins are white, while white longitudinal stripes in the centre of some leaves also occurs. At flowering, the plant's centre turns crimson red.

'Mauve Star' – About fifteen 7cm .-wide leaves form a 40cm wide flat rosette. The leaves have a broad, cream central stripe, with green margins. Irregular, narrow, purple bands and spots mark the leaves. At flowering, the centre flushes a violet-purple.

'Morado' – About fifteen 8cm.-wide leaves form a flat rosette around 40cm. across. The predominantly green leaves have variable, approximately 2cm. wide white margins, with irregular purple spotting. At flowering, the plant's centre becomes purple.

'Muscat' – About twenty 7cm.-wide leaves form a 50cm. wide flat rosette. The green leaves are edged with cream stripes of varying widths, as well as fainter longitudinal cream stripes in the leaves' centre. Horizontal, irregular, band of purple markings also occur on the leaves. The plant's centre flushes a violet-purple at flowering.

nivea – About twenty 4cm.-wide pale green leaves form a 40cm. wide semi-erect rosette. At flowering, the plant's centre turns white.

'Odean Head' – About fifteen 10cm.-wide leaves form a flat rosette about 50cm. across. The leaves are "burnt orange" in colour, with black/purple markings.

'One and Only' – About twenty 6cm.-wide leaves form a flat, compact rosette about 30cm. across. At flowering, the plants centre flushes a bright red, with the remainder largely being dark red. The leaves' tips are bright red. The central cluster of flowers is unusual for neoregelias, as they are raised above the plant's centre.

'Painted Delight' – About twenty 8cm.-wide, strap-like leaves form a 60cm.-wide flat rosette. The green leaves have dark purple markings, particularly towards the plant's centre. At flowering, the centre flushes pink-purple.

'Phyllis' – About twenty 8cm.-wide leaves form a semi-erect rosette about 60cm across. The light, pink red leaves have pink tips. At flowering, the centre flushes a bright pink, with the remainder of the plant assuming a deeper pink colour.

'Pink Floss' – About twenty 6cm.-wide leaves form a 40cm.-wide flat rosette. The leaves are yellow-green with faint pink-purple spotting and narrow banding. At flowering, the centre flushes a bright pink-purple, and the leaves' banding becomes a more intense colour.

'Predator' – About twenty 6cm.-wide leaves form a 40cm.-wide rosette. The green leaves have 1cm wide cram margins. A pink-red "overlay" covers most of the leaves' surface, especially in bright light.

***princeps* hybrid** – This plant has been in Australia for over 40 years. You may find plants (incorrectly) labelled as *N. princeps*. About fifteen 4cm.-wide, leaves form an open rosette around 50cm. across. At flowering, the plant's centre flushes an iridescent light purple, with the remaining portion of the leaves becoming purple-bronze in colour.

'Royal Cordovan' – About fifteen 6cm.-wide leaves form an open, 60cm.-wide rosette. In good light, the leaves are light crimson in colour, tending towards green in shady conditions. At flowering, the crimson leaf colouration becomes more intense, while the plant's centre turns a bright red.

'Sam Smith' – About thirty 5cm.-wide leaves form a flat, compact rosette about 40cm. across. At flowering, the plant's cen-

tre becomes a bright red, with the remainder being bronze-red.

'Sister Grace'– About fifteen 6cm.-wide leaves form a 40cm.-wide flat rosette. At flowering, most of each leaf flushes red-purple, while longitudinal red-purple striping occurs through the remaining portion, which is bronze-green in colour, of each leaf.

'Tangerine' – About fifteen 5cm.-wide leaves form a 35cm.-wide rosette. At flowering, the plant's centre colours bright red, with the balance of the leaves having a bronze-green colouration.

'Termite' – About twenty 6cm.-wide, leaves form a 50cm.-wide rosette. The green leaves have white margins of varying widths. Purple spots and irregular bands occur throughout the leaves. These markings become more intense in colour at flowering, while the plant's centre flushes a light purple at that time.

'Tossed Salad' – About twenty 8cm.-wide leaves form a 40cm.-wide semi-erect rosette. The bronze-green leaves have purple-red banding and spots, especially towards their tips. At flowering, the plant's centre flushes a pink-purple colour.

'Two Tone' – About twenty 8cm.-wide leaves form a flat 70cm.-wide rosette. The leaves are light purple/green in colour, while the plant's centre flushes violet – lavender at flowering.

'Van Dorme' – About fifteen 5cm.-wide leaves form a 40 cm.-wide flat rosette. The dark green leaves have thin white margins, and narrow, white striping elsewhere. In good light, the plant's leaves become flushed with pink. At flowering, the plant's centre colours a bright red.

'Victoria' "Pink" – About fifteen 5cm.-wide, leaves form a 30cm.-wide flat rosette. At flowering, the plant's centre colours pink-purple, which contrasts with the bronze colour of the leaves' remaining portions.

'Waipio Valley' – About forty 5cm.-wide leaves form a 50cm.-wide flat rosette. The bronze red leaves form a distinct point at their tips. At flowering the plant's flushes a deeper red.

Acknowledgements:

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

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to its offspring, although this outcome isn't always evident.

tenuifolia. contributes its caulescent growth habit.

xerographica typically contributes its wide, greyish-succulent looking leaves and its multi-branched inflorescence.

xiphioides "….usually transmits its very slow growth rate. The only hybrids yet to flower has been with *T.stricta*. The green flower bracts washed out the pink of the other parent. The large flower size did not come through well, the hybrid's flowers were about twice the size of *T.stricta* and less than one-quarter of *T.xiphioides*…." Dimmitt (1990) p.123

Concluding comments

Some concluding observations, in no particular order, on this topic are:

(a) It usually takes 2 or 3 generations before one can be confident as to the final characteristics e.g. size, inflorescence, of a particular hybrid.

(b) There appears to be little information available on the extent to which differ-

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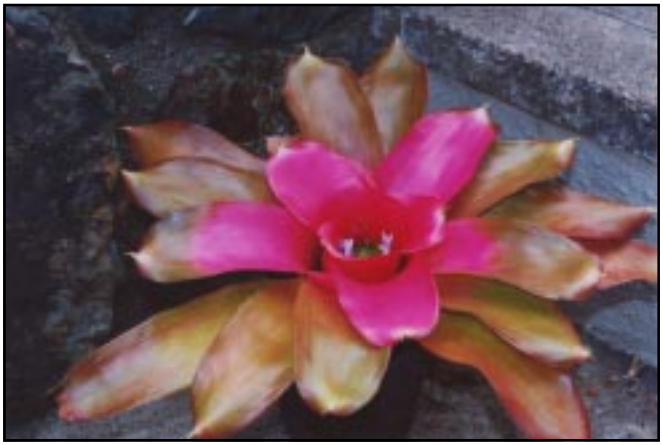
Neo. ‘Heck’
DU



Neo. 'Victoria Pink' DU

Neo. 'Van Dorme'
DU

Aechmea 'Perez'

by Ross Stenhouse

In 1945, Mulford Foster crossed *Aechmea racinae* with *Aechmea victoriana* var *discolor* to produce *Aechmea* 'Fosters Favorite'. This original crossing has produced a profusion of cultivars and hybrids, both by Foster and others. One of these hybrids is *Aechmea* 'Perez' and is the subject of the photographic series on the page opposite.

Aechmea 'Perez' has the inflorescence pendant (hanging down from its support) and the leaves are a all over deep red. This changes slightly as the leaves age; they get traces of green appearing in them.

Other hybrids produced from that original crossing (or by people repeating it) are *Aechmea* 'Black Jack' and Aechmea 'Fosters Favorite Favorite' and Aechmea 'Red Ribbon'. "Black Jack' and 'Perez' appear to be very similar and I would be interested if someone would contact me and point out the difference. *Aechmea* 'Fosters Favorite Favorite' is a variegated plant and from the photographs I have seen, the ovaries appear to have retained, through to maturity, the yellow as seen in the immature ovaries of 'Perez'. The petals seem to be the same colour as in 'Perez'.

What I found interesting about growing this plant is the way the ovaries on inflorescence change colour during the maturing process. They start out tightly clustered and are a very strong yellow and keep this form for about two weeks. They then become loosely clustered change to a bright red and finally to a dull red and maintain this form for a considerable amount of time. The flowers are fairly small with three petals. The petals have a strong blue colour with a thin light grey edge.

There is a final stage of the maturing of the ovaries which I have not shown in the photographic sequence. In this stage, the flowers close up and become thin stalk-like with a deep red colour matching the leaves. The ovaries become an extremely deep dark red colour. This form seems to last for a considerable time. Visually this form is not particularly interesting.

The breeding from *Aechmea victoriana* var *discolor* is very obvious in the mature ovaries. The pendant nature in the inflorescence appears to come from *Aechmea racinae*.

I particularly liked the flower with it's three petals. The strappy nature of the leaves in my specimen initially hid from me the interest of the inflorescence. It's a plant that needs to be grown in a cluster for best effect and it's deep red colour adds contrast in a see of green. Had I had a cluster I would have preferred to use it in my illustration photo.

More on *Aechmea* 'Perez' may be found in an article published by Derek Butcher under "Uncle Derek Says " on the following URL http://fcbs.org/butcher/A_Fosters_Favorite.htm.

Wanted: Photographs of your Shadehouse

A good photograph showing off your bromeliad collection in your shade house is wanted for the society's web site. The aim is to publish on the site a collection of shadehouse photographs in order to show to the world what is happening in Australia with regards to Bromeliads and shadehouses.

From what I have been hearing lately, shadehouses are an Australian invention so let's show the world how we do it!

Photographic sequence of an **Aechmea** 'Perez' - *note the change in colour and shape of the ovaries as they develop into flowers* *RS*

For Competitors and Judges

by Rob Smythe MSc
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Well, I am neither of the above so you may well ask what am I doing writing about this topic. How often do successful researchers set about a task and come up with something of interest which is quite peripheral to where they were heading? That is my reason for this note. In my professional career I found research dull and loved teaching. I felt since I only had one life I was not going up blind alleys for most of it (research). Now I am retired there are no shackles and playing at research is much more fun.

An interest for some time has been a neo known as *Neo. Corcia* x *Cruenta* [1]. This is around under many other names and as Derek Butcher will point out in another paper [2]. This probably means that the name on your plant is incorrect. If you have plants with any of the following names you need to concern yourself as to its correctness,

Neo. *Corcia* x *Cruenta*, *Neo*. 'Sun King', *Neo. cruenta* 'Sun King', *Neo*. 'Yellow Devil'. *Neo*. 'Lucky Strike', *Neo*.' Bonanza', *Neo*. 'Eureka', *Neo*. Golden Nugget, *Neo. cruenta* x *coreacae*, *Neo*. 'Sun King' x *kautskyi* or *Neo*. 'Gold Dust' .

After my years of discussion with growers and Derek Butcher, Derek seems to have come up with a reason for the confusion[2]. I was left with my plant actually being either *Neo*. 'Yellow Devil' or *Neo*. 'Lucky Strike'. Derek is as pig headed as I am about taxonomy. To convince him I had to do something more scientific(a little research) than the usual. I think I have convinced him that my plant, imported by a NSW grower is actually *Neo*. 'Yellow Devil'.

Now something interesting happened. As a result of collecting data to convince Derek I found that:

1. In the tropics neos grow with both a clockwise whorl or an anti-clockwise whorl.
2. The plants can have one type of whorl then change to the other type.
3. Plants on the northern side of my house had predominantly anticlockwise whorls.
4. Plants on the southern side had clockwise whorls.
5. The number of leaves to a whorl is of interest also, details later.

These observations were taken both with plants from the one batch of seedlings (*Neo*. 'Roy's Rogue' x self), split between the two yards and other plants in general.

What do I mean by 'whorl' you may well ask? When you stand over your bromeliad and look down at it you will notice that the plant is growing upwards either in a clockwise manner or an anti clockwise manner. How did I come to check on such a weird statistic? Preparing my case to convince Derek of course. I compiled the data originally from my photos and those found on the internet. Yes, the whorls of the northern hemisphere plants went a different way to mine. I lived in the UK and in the USA and forgot to check if water really did rotate in the opposite direction to the southern hemisphere when it went down the plug hole, though on a bigger scale, realistically, I remembered that cyclones and hurricanes spin in opposite directions due to earth's rotation.

This bit of trivia came to mind so I thought I would check it out with broms and beggared some of my argument in doing so. Realize at this point that I live in

Townsville which is in the tropics so sometime the sun moves across the sky to the south like what occurs in the northern hemisphere. Don't feel put out, I have known parochial Brisbane folk who did not know where Townsville was and I also lived in America and found out that some even believed India was on the American continent somewhere. I found two pups one advanced and one younger on the same plant but having reversed whorls so it is not a useful taxonomical feature. Thinking about this topic I looked deeper and found lower leaves with the whorl reversed.

My conclusion is that the whorl direction is a result of the sun (or light) traversing to the North or to the South of the plant. This may be due to which hemisphere you are in or which side your shade comes from. I am saying that half the broms inner leaves are in more shade than the other (except at times in the tropics) and the exposed side is dictating whorl growth, following the suns direction of movement. Something like the sunflower but much slower and not reversing.

So What?

After knowing all that it might be considered as important as knowing the sex life of a garden worm in detail. As I don't believe in competitive growing (causes division) my interest was about that proposed for the worm. What if you do competition growing?

What is the first rule you are told?

" Keep rotating the plant"

This now reasons as good advice as this won't change the whorl character.

To keep leaves of balanced length you may be considering either putting plants into more shaded areas or moving them out into more sun. Now you growers living in more southern areas may, using vertical shading, artificially create what in effect is sun from the south and the whorl will change upsetting the conformation of your plant and it will be distorted. Judges will say, "Tut tut— sorry".

I'll explain what appears to happen. This is from my inspection of my own tropical plants. Looking down at your broms and looking back from your youngest leaf the second youngest is usually just less than a third of the way round. By the time you come round to where the first leaf is pointing you are nearly exactly half way between third and fourth leaf and so new leaf nicely fills the gap. Looking at my plants that changed whorls, or about to change, the second leaf is way around the other side (180 degrees) then whorls back in the other direction. Judges might note this irregularity as bad conformation. So rule two should be

"don't change the orientation of the light if you move your plant"

If you grow broms in the ground and not near shade and you live in the south let me know if yours are all the same whorl type.

Visitors from the south always comment that our plants in the tropics are bigger plants with more leaves but there is always an appended comment that our plants down south have one of the following, a much tidier, nicer, regular or more compact growth. Feel sorry for these folk now as they will now have to endure the details of whorls in my long winded answer.

Breeding:

I was also interested in calculating the number of leaves to a whorl in each of my very young seedlings. This way I thought I could predict that those with the larger numerical value would have the densest rosette. It has limited usefulness in the trop-

ics due to whorl variability but I made the following observations which may be of more use to serious breeders living outside of the tropics.

1) The most common whorl size is around three and a half leaves.

2) Plants with whorls of three and a half, as defined above, were very open plants having five stacks of leaves with gaps between the stacks eg *Neo*. 'Solar Flare'. These will never win a competition.

3) Neoregelias with a whorl of three or four would also have stacks of leaves and would never win anything as they would have holes you could drive buses through with just two or three stacks of leaves. These would be very inefficient absorbers of radiation and so I can say that I have never seen these configurations with neoregelias though I have seen a couple of species with a whorl of three eg *Quesnalia marmorata*. These are plants with a few tubular long leaves. Second leaf is 180 degrees on and the third leaf is back with the first leaf.

4) The better reliable show plants (e.g. N. Roy's Special) have whorls greater than three and a half and less than four, resulting in no close leaf stacking at all.

5) I don't have any of those cork screw type plants so I don't know what is going on there. I expect the whorl number is not three and a half, but very close to it.

6) If I was looking at seedlings for future show purposes I think I would be looking for whorls around the three and three quarter mark. If I found more than one I would then concentrate on the one with the widest leaf.

REFERENCES:

1. Shane Zaghini Bromeliads: A guide to the Beautiful Neoregelias p6

2. Derek Butcher - Bromeliaceae - 2005

Continued from page 38

ent clones, of a given species, produce hybrids with dissimilar traits

(c) The comments in the first part of this paper are based on primary crosses (F1) between species. There is little experience with F2 crosses.

(d) While relatively little information is available on the traits which "strong" (dominant) parents such as *durattii*, *bulbosa* transmit to their offspring, there is even less available on which species do not transmit their characteristics. Yet this information is just as important if future hybridists are not to repeat the "mistakes" of the past.

(e) Crossing two similar species e.g. *recurvata* and *stricta* often results in offspring displaying hybrid vigour e.g. larger inflorescences than either parent (Dimmitt, 1990). The converse is also often true. Perhaps there is a case to concentrate on crossing species within a given subgenus.

(f) While a matter of personal preference, I've found hybrids with *albertiana, duratti, fasiculata, streptophylla* and *xerographica* as a parent to be well worth growing.

REFERENCES:

Dimmitt, M.A. (1990) **Additional notes on breeding superior tillandsias**. BSI Journal v.40 (3) 118-123.

In the Jan/Feb 2006 edition of Bromeliaceae, a number of photographs supporting this article will be published which augment this article.- Ed.

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Letters to the Editor

Dear Editor

Congratulations on the direction Bromeliaceae is heading. Issue # 5 was full of interesting articles and you can't beat the knowledge gained from personal experience.

If I had known that looking after mother "was most important", I might have had more than one pup from my *Aechmea* 'Ensign' before she bit the dust, still in her smallish pot with original mix in the mistaken belief that stressing causes the plant to panic thereby launching into reproductive mode. In future I will happily try this new device.

I wondered when I read about the man who exhibited his *Aechmea* 'Rainbow' under the name *Aechmea orlandiana*, whether he may have had a similar experience to me. A good while ago, I acquired some plants of *Aechmea orlandiana* 'Dark Form' from a life member of BSQ who mentioned at the time that he couldn't work out why some pups they threw were very black and other pups were flushed with red. Over time I have found this to be true.

The red ones grow into something that resembles *Aechmea* 'Rainbow' which I already had, in fact I can't tell the difference. Having been careful in my labelling the plants have never become confused. But I am reluctant to take it upon myself to call them 'Rainbow' as the parents were originally labelled 'Dark Form'. Am I wrong?

And finally can I echo the members plea for an updated BOOK form of the Bromeliad Cultivar Registry besides the Internet version. There are far more of us that would like to see it in that form and we are not all of an advanced age. What could be better than sitting in the garden with a book. Beats

sitting at a computer by far!

regards

Carmel Cullen

Hi Ross, first I must congratulate you on *Bromeliaceae* No.5 2005,n ow to a few comments Curiousity may have killed the cat but it is exciting stuff! I was pleased to see Lynn Hudson waving the 'red' flag and every story has a side story. In 1964 Yamamoto crossed *Aechmea fendler*i with *chantinii*. In the mid 1970's this plant was in demand in Florida and was variously sold under parentage or 'Red Flamingo'. It was not until 1979 that Yamamoto registered his hybrid as 'Flamingo' - note the dropping of the 'Red'! Meanwhile it had been found that Hummel also had named a 'Red Flamingo' which was a different plant again! Thanks to Lynn's ferretting the records are now correct.

If anyone wants to be a friendly ferret it costs nothing to join. and now to that four letter word 'grex'. This term still applies and should be used by hybridists while seedlings are under their care. When these are adult and leave home they should have a cultivar name as identity. Parentage is captured when this cultivar name is put on the Register. Now to the super-duper data base I mentioned in my article.

You can search on anything recorded or any combination of anything recorded. So Andrew can enter parentage, if he wants, to see which cultivars are related. If Ross had been curious, and used the same technique, he would have found that the plant featured on the rear cover is called *Neoregelia* 'Purple Princess' .

While talking of quasi grex names you may not realise that there is no Neoregelia 'Aussie Dream' as such. For the inquisitive, detail is on the cultivar data base.

Finally to Lynn's comment about another printed Cultivar Register. I believe that the computer data base is the best since sliced bread because you can see photographs. The BSI have been wary about publishing a new Register partially due to cost and a dwindling membership. It may be a project your Society may well wish to take up.

Derek Butcher

Dear Ross

Ever since I started bromeliads, I have tried to stop myself using the word 'pup. I cringe every time I let the word slip and hope it is not too often. 'Pupping' sounds even more childish and silly. While it is probably too much to expect members to change their vocabulary and use 'offset', a determined effort should be made.

The purpose of this letter is, however, not to try and change what people say, but to plead for a change in what is written. I count at least 38 times, pup, pups or pupping is used in the latest Bromeliaceae (Sep-Oct 05). This is, I would argue, unacceptable , belittles our magazine and against any publishing convention.

If we can get rid of 'Pup' then perhaps we can start looking at 'mother' and 'old mother'.

Yours faithfully

Mike Symmons

To the Editor,

I have just returned from a trip to Peru, trekking the Inca trail. Along the way I was delighted to see the abundance and ease that various bromeliads grew from seemingly every nook and cranny. Sheer 500 m cliff covered with what I assumed to be *Aechmea Blanchetiana* and trees laden with neos. It was a bromeliad lovers visual

orgy. Perhaps if you could identify for me the bromeliad growing on the thatched roof below. It would greatly ease my curiosity.
Many Regards
Andrew Tremelling
Andrew - Great photos, see back cover. Ed.

Dear Ross

<u>*Aechmea blanchetiana*</u>

With reference to Rob Smythe's interesting article in the last edition, I grow three forms of *Aechmea blanchetiana* – gold, green and yellow. Last season these majestic plants were a blaze of colour when all three were in flower with identical classic *blanchetiana* inflorescences.

The bronze or gold form came from the wonderful garden of Grace Goode and keeps the golden colour in our "all day sun", even in our hottest season. The gold grows to the largest size with leaves that can be one and a half metres long.

The green form was a seedling from Dr. Arden Deardon. This plant stays a rich apple green then is slowly diffused with yellow coinciding with the formation of the inflorescence.

Our yellow form Rob mentions came from seed from George Stamatis, formerly of Scottsbrough in South Africa. George purchased his plant from Dennis Cathcart of Florida. This plant is yellow throughout its life cycle but does not grow as large as the gold form; even in South Africa it is smaller. Each of our seedlings flowered true to *blanchetiana* form.

<u>*Billbergia* 'Hallelujah'</u>

Billbergia 'Hallelujah' is one of the most beautiful bromeliads available and I can almost picture Don Beadle exclaiming, "Well, hallelujah, just look at that!" when he saw the developing colours, then finally the outstanding inflorescence.

Just one sighting and a grower usually includes 'Hallelujah' on the "Wish List". I complained to Olive Trevor that I could not keep up with demand and Olive advised me "fertilize it". I replied that she had taught me not to fertilize billbergias and her answer was "If you want plenty, fertilize them." I was obedient and a few months down the track I phoned her and said, "My Hallelujahs are green". Olive laughed and replied, "I bet you have plenty, now wait for the next generation".

This was a great learning curve as I found I could have a range of colours in the one plant, depending on the amount of light given to each plant. They range from quite dark green, almost black, through deep purple to palest pink, all with spots and dots of cream and white.

I have seen it listed as "*Billbergia* 'Hallelujah' dark form" in society show results but this is incorrect. Don made just one that we can manipulate using light to attain varied effects.

see you soon, regards
Lyn Hudson

Dear Ross

I have been growing bromeliads for a considerable time and as you are looking for contributions from club members , I am sending you two photos. I hope you can use the prints because I don't have a digital camera.

with best wishes
Helmut Jesse

PS will we ever see the Jan/Feb 06 issue?

No probs using the prints I have used them, as for the Jan/Feb issue, I wasn't the editor back then, however there are tentative plans to produce an issue of sorts to keep faith with the members. Ed.

CALENDAR OF EVENTS: NOV. 2005 – FEB. 2006

(compiled by Bob Reilly)

5-6 November Society's Spring show and sale of bromeliads at Mt Coot-tha Botanic Gardens. Over 500 varieties/hybrids will be on sale. Saturday (5th) 8am-4pm, Sunday (6th) 9am-3pm. Admission: $3-adults, under 14- free if accompanied by an adult.

17 November Society general meeting. Venue: Uniting Church Hall, 52 Merthyr Road, New Farm.

- Beginners' class topic: Growing miniature neoregelias. Discussion led by Arnold James. Commences 7.30pm.
- Main meeting topic: A South American trip. Presenter: Greg Aizlewood.
- Popular vote: Any genus-species or hybrid.
- Plant of the month: Ursulaea, Vriesea, Werauhia, Wittrockia.

8 December Society's Christmas party. There will be a free barbecue and monster bromeliad raffle. Join with other Society members in celebrating the festive season. Commences 7pm, at Uniting Church Hall, 52 Merthyr Road, New Farm.

19 January 2006 Society general meeting. Venue: Uniting Church Hall 52 Merthyr Road, New Farm.

- Beginners Class topic: Growing decorative foliage vrieseas. Discussion led by Olive Trevor. Commences 7.30pm.
- Main meeting topic: Different forms of *Tillandsia fasiculata, T. jalisco-monticola* and their hybrids. Please bring along any of these plants you may have. Discus sion leader: Nev Ryan.
- Mini Show Class 1 Aechmea, Class 2-Vriesea, Class 3-Dyckia, Class 4. Any other mature (flowering) bromeliad. Species and hybrids are eligible for entry in all classes.
- Plant of the month: Species and hybrids from the following genera: Aechmea, Alcantarea, Ananas Androlepsis, Areococcus, Ayensua.

16 February 2006 Society Annual General Meeting. Venue: Uniting Church Hall 52 Merthyr Road, New Farm.

- Beginners Class topic: Fertilising bromeliads. Discussion leader: Peter Paroz. Commences 7.30pm.
- Main meeting topic: Society's Annual General Meeting followed by a slide evening presented by Doug Upton.
- Popular vote: Any genus: species or hybrid.
- Plant of the month: species and hybrids from the following genera: Billbergia, Brewcaria, Brocchinia, Bromelia.

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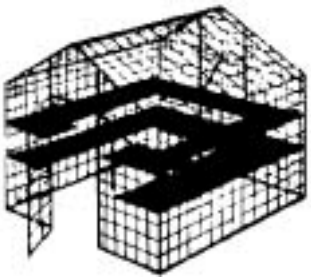

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