

Bromeliaceae



VOLUME XL - No. 5 - SEPTEMBER/OCTOBER 2006



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Front Cover: *Bil.* 'Poquito Blanco'
Rear Cover : *Bil.* 'Stellar Attraction'

Photo by Ross Stenhouse
Photo by Ross Stenhouse

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Plant Competition Results

August Meeting - Popular Vote

Advanced	First	B. Paulson	<i>Dyckia</i> 'Black Tracker'
	Second	D. & J. Upton	<i>Fosterella spectabilis</i>
Intermediate	First	L. Gamble	<i>Neoregelia carolinae</i> x <i>carcharodon</i>
	Second	L. Gamble	<i>Guzmania conifera</i>
Novice	First	A. McBurnie	<i>Guzmania</i> 'Symphonie'
	Second	P. Barlow	

Pollination of Bromeliads

By Eileen Killingley

While attending the New Zealand Conference and listening to the speakers, I guess I again became aware of how many things about bromeliads that “I didn’t know I didn’t know!” For example, finding it fascinating when I saw a slide of the showy *Guzmania sanguinea* var. *comosa*, with its brilliant red bracts—which are not part of the inflorescence but are used as a flag to attract pollinators to the rather insignificant flower sunk deeper in the rosette (somewhat similar to a *Neoregelia*)—I looked for further information.

I was aware that plants need pollinators, such as bees, butterflies, etc., but I had not thought too deeply about perfume, colour, etc., just kind of going along with the easy idea that these are for the gardeners’—or nature lovers’—pleasure. But on checking on *Guzmania sanguinea* var. *comosa* in Jose M. Manzanares’ beautiful new book, *Jewels of the Jungle: Bromeliaceae of Ecuador, Part I Bromelioideae*, I found some beautiful pictures of this plant, and more fascinating information (for me, at least) on “Inflorescences, Flowers and Pollination”.

The book explains that (in Ecuador) bromeliads with red and yellow inflorescences are pollinated by hummingbirds, but those with green inflorescences are pollinated by insects or bats. Some species that flower at night and are pollinated by bats include *Guzmania alborosea* and *Werauhia greenbergii*. *Guzmania sanguinea*, with its flowers submerged in the centre, changes its leaf colour from green to a brilliant red to attract hummingbirds. In *G. sanguinea* var. *comosa* the leaf colour remains green but a largish colourful tuft of bright red bracts (flower-like

in themselves) projects on a “stalk” from the centre to attract a pollinator.

In general, the pollination of bromeliads is accomplished by hummingbirds, bees, butterflies and other insects during the day and by bats and moths at night. Other birds and small mammals also pollinate bromeliads. Birds and insects are attracted by and pollinate the majority of flowers containing nectar. In their habitat one can observe, in various species of *Aechmea*, ants collecting the nectar from inside the flowers and thus pollinating them at the same time. In the province of Zamora Chinchipe (Ecuador), flies, smelling the strong odour of garlic given off by its green flowers, are attracted by *Guzmania confusa*. Those species pollinated by insects during the night possess a delicate fragrance, as is the case of several *Racinae*.

The flowers in the majority of the genus *Tillandsia* subgenus *Phytarrhiza*—such as *Tillandsia straminea*—emit a light fragrance to attract butterflies. The heat and humidity of the day accentuate the perfume from the flowers of *Tillandsia platyrhachis*. When the atmosphere is dry in the semi-desert valleys, *Tillandsia caerulea* is fragrant at midday and *Tillandsia dodsonii* (which in itself is interesting as its inflorescence is more orchid-like, reaching up to a metre long) is fragrant at dusk. *Aechmea woronowii*, with white flowers, produces a fragrance from the beginning of anthesis, attracting bats and moths as pollinators. When it rains the strength of the chemical makeup that emits the fragrance diminishes. This is a characteristic common to all fragrant flowers.

In the subfamily Bromelioideae, after pollination, the ovary begins to develop and forms a fruit. The function of the fruit is to protect the seeds during formation and to favour their dispersal. (Fruiting, again, not just for the benefit of us humans!)

These observations serve to emphasise some of the amazing strategies that living things adopt to aid in their survival and propagation.

We will shortly be adding two beautiful new books to our library: Jose Manzanares' book, as above, and Francisco Oliva-Esteve's "Bromeliads". As our Library has quite a comprehensive collection of books and Journals I hope that you will use it and enjoy!

BSQ Seed Bank

Don't forget that the society has established a seedbank under the stewardship of Doug Parkinson. Its early days for the bank, however it is up and working.

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

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

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Bromeliad Bonanza

11-12 November 2006

**Show and sale of plants
to be held at Mt. Coon-tha
Botanic Gardens.**

Over 500 varieties and hybrids of bromeliads will be on sale.

It will also be the first public release of the book "Starting with Bromeliads". This 100 page guide to growing bromeliads in the sub-tropics has over 200 photographs and 200 plant descriptions.

Other bromeliad books will be on sale.

Opening times:
Saturday 8 am to 4 pm,
Sunday 9 am to 3 pm.

Admission:
Adults \$3,
children under 14 free

For Beginners Only

(by Victoria Padilla)

Reprinted, with permission of the Bromeliad Society International, from the Bromeliad Society Bulletin, September-October 1961, v. XI (5), p. 83.

There are many factors that enter into the successful growing of bromeliads (e.g. temperature, smog, humidity, light, etc.), any of which would take many pages to cover adequately. However, the newcomer to the field need not concern himself too deeply at first with each and every aspect, of each and every factor, if he will pay heed to only a few simple rules:

- It matters not what compost is used (happu, fir bark, pumice, leaf mould, etc), so long as it permits good drainage and can be easily leached. It should be material that will not readily break down or be a host to insects, fungi, etc. It should be a compost that can be “controlled” by feeding nutrients.

- Watering is very important—be sure that water drains quickly through the pot, and do this 2 or 3 times each watering, so as to eliminate soluble salts from the compost. Bromeliads cannot accept soggy compost.

- Ventilation, or a nice breeze, at all times is desirable, in fact, many growers insist that it is essential to successful bromeliad culture. Remember that bromeliads are air plants.

- Fertilisers should be applied at weak strength and at regular intervals. As to the brand, most of them seem to do very well.

- With the exception of the soft green-leaved bromeliads such as vrieseas and some tillandsias, give your plants all the light you can without burning the leaves. Most plants need light to flower.

- Bromeliads seem to do rather well in a considerable range of temperature. The higher the day temperature, the greater the

humidity and water requirements. A minimum of 5 degrees Celsius and a maximum of 33 degrees Celsius should produce good results.

- Keep your growing areas clean, and use any of the standard insecticides for control. This is the time (September/October in the northern hemisphere) to give your greenhouse a good, thorough cleaning and fumigating.

- Learn to understand the needs of your plants; it will be fun and give you wonderful returns.

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The Editors Desk

by Ross Stenhouse

Being a relative newcomer to the world of horticulture much of what I receive each week for publication contains concepts that are new to me. During the compilation stage of each issue I am becoming a bit more aware about some of the science behind the growing of bromeliads.

As I read each article, I sometimes think that the article has made statements or claims that conflict substantially with other articles that we have published.

To the purist this conflict could cause some concern, because sometimes the articles seem to have such glaring inconsistencies.

I see the same situation occurring at monthly meetings of the association. There we have members giving presentations and usually they hedge their bets with a statement to the effect than "This method works for me, your particular growing conditions may differ from mine and so you may get a different result."

So when reading the articles in Bromeliaceae, please remember that we publish articles of a general nature. We hope they are educative, however there is an unwritten statement attached to each article and it is "The author wrote the article in good faith and what they propose works for them with their particular set of conditions".

oOo

In recent months I have been heavily involved in producing the society's publication "Starting with Bromeliads". Its amazing just how of our much of our time this project has consumed. Finally after 22 versions, it has made the printers, and the proof copy looks very good.

It was quite a steep learning curve with the book because of the lengths we

had to go to by using "perfect binding" compared to the normal "saddle stitch" style we use for this journal.

Bob Reilly and I hope you will enjoy reading your copy of the book and will find it useful. We have tried to produce a book that is informative to both the beginner and the intermediate grower. The book is 100 pages in length and contains 208 full colour images of bromeliads.

oOo

You may notice a new look with this issue of the journal. I have changed from using Adobe PageMaker to Adobe InDesign CS2 software. InDesign is a far superior product and since I had to re-do my master document, I thought I would use the opportunity to introduce some cosmetic changes as well.

oOo

We are still looking for members who are prepared to have other members pay them a visit. I will be collating a list of those who have indicated their acceptance so far and the full list will be placed on the association web site.

Visit A Fellow Member's Garden

Many members are pleased to have visitors with whom they can share their passion for horticulture.

The following members will be pleased to have fellow-members visit their gardens.

Bette Gill
Ph 4978 1957
Gladstone

Len and Sheryl Waite
Ph. 07 54967795

When Bromeliads Grow Old

(by Richard Oeser M.D.)

Reprinted, with permission of the Bromeliad Society International, from the Bromeliad Society Bulletin, January-February 1959, v. IX (1), p.7.

Upon the European continent there exist bromeliads that are very old. There one can see for instance, specimens of *Tillandsia stricta* whose trunks have reached a length of 60 cm over the course of decades. This trunk is dry and leafless, but the growing tip is soft and green, and only by the length of the trunk can an age of perhaps 50 or 60 years be deduced. With other bromeliads, no long trunk reveals their great age. They reproduce vegetatively and many of the rarer plants exhibited in various collections are offsets of a single mother-plant, imported long years, or decades, ago.

These being descendants of one mother-plant, makes it impossible for those that are self-sterile to produce viable seed even if one hand-pollinates two flowering plants that are, by blood relationship, one plant. The great age of certain plants shows still another resultant effect; they flower increasingly less often and finally stop blooming altogether, while the ease and readiness with which they produce offsets increases.

Personal observations established that fact with *Tillandsia stricta* and *T. dianthoidea* (now *T. aeranthos*) With an *Aechmea weilbachii* with brownish-red coloured leaves, frequently seen in our collections, one hardly ever experiences a flowering. These examples can be multiplied many times, and this cessation of flowering ability is attested to by other experienced growers. I, myself, only became aware of this sign of senility after importing young specimens of the above-mentioned

species that, under identical growing conditions, flowered regularly every year.

In their natural habitat plants probably never reach the age they attain in the glass houses of old Europe despite the wars that have swept over her. Possibly the natural conditions of their native home preserve their flowering ability by the timely change of the seasons, and dry and wet periods, which are no longer with us.

Book Review: The Pineapple Botany, Production and Uses

by Bob Reilly

The pineapple is the most famous, and economically important, member of the bromeliad family. This book, edited by D. P. Bartholomew, R. E. Powell and K.G. Rohrbach, covers all aspects of the pineapple. It was published by CABI Publishing in 2003, and can be purchased in Australia through Angus & Robertson for about \$230. It is also in the Society's library.

Perhaps the most interesting chapters of this 300 page book for the bromeliad grower are the first two. They cover:

- The pineapple's origin, cultivation history and current production areas,
- Its morphology, anatomy and taxonomy.

Other chapters cover all aspects of the pineapple's horticulture, harvest and processing. The information on the pineapple's disease control and nutrition strategies can be used to infer approaches to these matters for bromeliads more generally. However, the information in Dr. Benzing's book: Bromeliaceae—Profile of an Adaptive Radiation, may be of more value in this regard.

In the book's first chapter, the point is made that the pineapple had been "do-

Measurement of Light Intensity

Author: Peter Paroz

If you have a camera with a built in light meter or a separate light meter you can get a useable measurement of light intensity as follows:

Set the camera or meter to ISO 100, and the shutter speed to 1/50 or 1/60 of a second. Using a sheet of good quality white matte (not glossy) paper, point the camera so the paper fills the frame and is as near to perpendicular to the paper as possible without shading the page. Adjust the lens opening to give the correct exposure. Refer the F stop to the chart.

F stop	1.4	2	2.8	4	5.6	8	11	16	22
f. candles	8	16	32	64	128	256	512	1024	2048

These are approximate values only. Camera meters measure the light spectrum applicable to photography. Light meters for plant growth studies measure PAR - Photosynthetically Active Radiation- the light spectrum that plants utilise for photosynthesis

mesticated” by the Amerindians thousands of years before the arrival of Europeans in 1493. The Amerindians used the pineapple for a range of uses, including: as a fresh fruit, alcoholic beverages, fibre production, a variety of medicinal purposes, and poisoning arrowheads. One curious fact is that while pineapple production in European glasshouses expanded during the 18th and 19th centuries, it then went into decline after that due to the lower cost of shipping the plant, with the fruit attached, to Europe from America! Annual world production is about 14,000,000 tonnes.

In the second chapter, there is a detailed discussion of the pineapple’s morphology, followed by a taxonomic revision of the *Ananas* and *Pseudananas* genera. The species *Pseudananas sagenarius* becomes *Ananas macrodentes*, while the *Ananas* species, *ananassoides*, *nanas*, *lucidus*, *paraguazensis*, *cosmos*, *bracteatus*, and *fritzmuelleri* are downgraded to the level of five varieties of *A. cosmos*. (The former species, *A. monstrous* is regarded as an invalid name). It remains to be seen whether all other botanists will support the proposed changes.

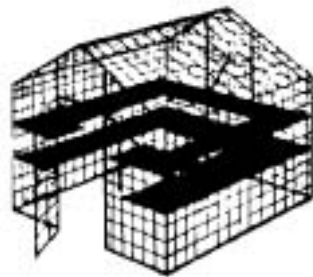
The first two chapters of the book are worth reading by anyone with an interest

in pineapples. If you would like to grow a pineapple in your backyard, then the other chapters of this book are worth at least a quick “once over”.

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Vr. poenulata



Vr. inflata var. *seideliana* n.n.



Vr. 'Plantation Pride'



Vr. 'Bobbie'

Growing Vrieseas

(by Bob Reilly)

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

While there are several hundred vriesea species, over a thousand hybrids exist, most of which have not been formally registered. This is unfortunate, as it is difficult to easily “spread the word” about an outstanding, unregistered hybrid. Many vrieseas have plain green leaves and are grown primarily for their colourful inflorescences. In this article, they are described as “green leaved vrieseas”. Others are mainly grown for their decorative foliage, and are described here as “foliage vrieseas”

Vrieseas are mainly epiphytes and occur in moist, shaded conditions in nature. They usually occur in environments similar to those prevailing in southern coastal Queensland.

All vrieseas have “tanks” formed by their central leaves. These tanks store water that helps the plants to meet their moisture requirements. All have spineless leaves.

Potting mixtures used successfully include:

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

- Coarsely ground “clinker” to which slow release Nutricote or Osmocote is added.

- A mixture comprised of 1 part coarse river sand to 1 part Cocopeat or peatmoss. Slow release Nutricote or Osmocote is added to this mixture.

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

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

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

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

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

In winter, water the plants heavily once



Vr. 'Ella'



Vr. saunderii



Vr. 'Pinkert'

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

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

The vriesea hybrids and species described in this article are, generally speaking, readily available. (However, some are rare.) They can be obtained from bromeliad nurseries, at monthly meetings of the Society, and during the June and November shows.

Green Leaved Vrieseas

'Barbarosa' Red Form Approximately 15 green leaves, 3 cm wide, form an open rosette about 40 cm across. The multi-branched, orange-red spike rises about 40 cm above the plant's leaves. Each branch is about 15 by 7 cm, while the flowers have yellow petals.

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

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

'Bobbie' Approximately 30, 4 cm wide, light green leaves form a 40cm wide, open rosette, about 30 cm high. The multi-branched inflorescence has about 10 dark red

branches, each of which is around 20 by 2 cm initially, changing to 20 by 5 cm as flowering progresses. The flowers have yellow petals.

'Carinata' Approximately 20, 2 cm wide, light green leaves form a semi-erect rosette around 15 cm across. A 7 to 10 cm long spike rises well above the plant's leaves. The spike's centre is a bright crimson-red, turning to yellow-green at its edges. The flowers have yellow petals.

This plant is one of the hardiest bromeliads, and one of the first plants most people acquire. It has been used to produce many hybrids including **'Marie'**, which is grown by many bromeliad growers.

'Charlotte' About 20, 3 cm wide, green leaves form a 40 cm wide, semi-erect rosette. The multi-branched yellow spike rises well above the plant's leaves. Each branch is about 10 cm long and 4 cm wide.

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

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

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



Vr. 'Sunshine Flame' x pinolti



Vr. carinata x fenestralis



Vr. fosteriana 'Speckles'

occurs until a clump is formed.

'Ella' About 20, 3 cm wide, light green leaves form a 20 cm wide, semi-erect rosette. The multi-branched, red spike rises well above the plant's leaves. The size of each branch varies, ranging from 5 to 10 cm long and about 3 cm wide.

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

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

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

'Grande' Numerous, 2 cm wide, green leaves form a semi-erect rosette approximately 30 cm across. The arching, multi-branched inflorescence rises well above the plant's leaves. Each of the yellow branches is about 2 cm wide and 5 cm long.

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

heliconioides Approximately 15, 3 cm wide, green leaves form a flat rosette about 40 cm across. The sword-shaped inflorescence

is around 25 by 7 cm, and pale green to red in colour. The flowers have white petals. The inflorescence is "twisted" in appearance, giving rise to the species' name.

inflata About 20, 4 cm wide, light green leaves form a flat rosette approximately 40 cm across. While there are numerous clones of this species in circulation. The paddle-shaped inflorescence is about 15 cm long and 6 cm wide. It is red in the centre and yellow on the outside.

inflata var seideliana (nomen nudum) About 20, 4 cm wide, green leaves form a flat rosette approximately 40 cm across. The inflorescence consists of a 20 by 5 cm, orange-red spike. Initially, the inflorescence is semi-pendent, but then becomes erect, the one shown on pp, 10 is an especially nice one.

'Isobel' Numerous, 2 cm wide, green leaves form a semi-erect rosette approximately 40 cm tall and wide. The multi-branched inflorescence rises well above the plant's leaves. Each branch is about 15 cm long and 5 cm wide. They are red in their centres and yellow at their tips.

'Lucille' (variegated) About 20, 3 cm wide, leaves form a semi-erect rosette approximately 30 cm across. The green leaves have central, thin, white stripes. The red-orange, sword-shaped inflorescence rises well above the plant's leaves. It is about 20 cm long and 5 cm wide.

'Moonglow' Around 30, 2 cm wide, green leaves form a semi-erect rosette approximately 60 cm across. The pale green leaves are marked with irregular, wavy, thin, dark green horizontal lines. The 50 cm long, multi-branched inflorescence rises well above the plant's leaves. Each branch, which is approximately 20 by 5 cm at flowering, is red-orange near its centre, and yellow-green at the tip.

'Negro' About 20, 4 cm wide, green leaves form an open rosette approximately



Vr. 'Shima Ryu'



Vr. bleherae



Vr. philippocoburgii

40 cm across. The red, multi-branched inflorescence rises well above the plant's leaves. Each branch is about 20 cm long and 5 cm wide.

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

'Orange Crush' Numerous, 3 cm wide, light green leaves form an open, semi-erect rosette approximately 40 cm tall and wide. The open, multi-branched inflorescence is orange-yellow.

'philippocburgii' Numerous, 6 cm wide, green, maroon-tipped leaves form an open semi-erect rosette approximately 100 cm across. A 150 cm tall multi-branched inflorescence rises well above the plant's leaves. The bracts are red, while the petals are greenish-yellow. This plant requires cold, but not freezing, conditions during winter to flower well.

'Pinkert' Numerous, green leaves with red spotting form an erect rosette approximately 20 cm tall. The leaves are 5 cm wide at their base and 0.5 cm wide towards their tips. The pendent, red inflorescence projects well beyond the plant's leaves.

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

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

'poelmanii Ginger' Around 20, 2 cm wide, glossy green leaves form a compact ro-

sette about 40 cm across. The multi-branched inflorescence rises well above the plant's leaves. Each branch is bright red, and about 20 by 5 cm.

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

'Purple Cockatoo' About 30, 3 cm wide, green leaves form a semi-erect rosette approximately 40 cm across and 20 cm tall. The purple, fan-shaped inflorescence rises well above the plant's leaves and is about 20 cm long and 8 cm wide.

'Purple Haze' About 20, 3 cm wide, green leaves form a semi-erect rosette approximately 40 cm across. The purple, sword-shaped inflorescence is about 25 cm long and 8 cm wide.

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

'Sunshine Flame' x pinotii About 20, 4 cm wide, green leaves form an open rosette around 40 cm across. The semi-pendent, red-orange, sword-shaped inflorescence is approximately 30 cm long and 5 cm wide.

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



Vr. 'Highway Beauty'



Vr. 'Red Chestnut'



Vr. carinata

‘Talon’ About 20, 4 cm wide, green leaves form an open rosette approximately 40 cm across. The sword-shaped inflorescence, which is purple-red at its centre and yellow towards its tips, is about 20 cm long and 5 cm wide.

‘Tanya’ Unreg. Approximately 20, 5 cm wide, pale green leaves form an open rosette approximately 50 cm across. The orange-red, multi-branched inflorescence rises well above the plant’s leaves. Each branch is about 15 cm long and 3 cm wide. The flowers have yellow petals.

‘Tiffany’ About 30, 2 cm wide, green leaves form a semi-erect rosette approximately 40 cm across and 20 cm tall. It has a multi-branched, red-yellow, fan-shaped inflorescence. Each branch is about 10 cm long and 5 cm wide.

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

‘Werner Rauh’ x ‘Prinsler’s Red and Yellow’ Numerous, 3 cm wide, green leaves form a semi-erect rosette approximately 40 cm across. The red/orange, multi-branched inflorescence rises well above the plant’s leaves. Each branch is about 4 cm wide and 12 cm long.

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

Foliage Vrieseas

bleherae. About 15 leaves, 2 cm wide at their base, form a small rosette about 40 cm wide and 20 cm high. The underside of the leaves typically is purple in colour, with the upper surface being grey-green. A yellow

sword-shaped inflorescence, which is 10 to 15 cm long and about 4 cm wide, is located at the end of a yellow stalk (floral scape) that rises well above the plant’s leaves. The flower’s petals are coloured yellow. This is a vigorous plant, and usually produces five or more pups.

There is a variegated form of similar dimensions, and vigour, to the non-variegated form. However, the variegation is quite variable and the plant produces non-variegated, as well as variegated, pups.

carinata x fenestralis About 20, 2 cm wide, leaves form a semi-erect rosette approximately 25 cm across. The light green leaves have networks of thin, dark green, irregular banding and markings. The yellow and red, sword-shaped inflorescence is about 15 cm long and 5 cm wide.

fenestralis. About 30 leaves, 5 cm wide at their base, form a rosette up to 60 cm wide and 30 cm high. The leaves are tightly packed, and their tips curl back on themselves, giving the plant a compact shape. The upper surface of the leaves is a mosaic of dark green and light green patches. As the leaves age, the dark green patches appear to become more dominant. The underside of the leaves is covered in small dark brown-red circles. The inflorescence consists of up to thirty flowers, with yellow petals, spaced out along a branching spike.

fosteriana. About 20 leaves, 5 to 7 cm wide, form a 60 cm wide rosette. There is considerable variation in leaf colour. Typically though, the light green leaves have dark red to purple tips, and a fine network of dark green lines on a light green background. The underside of the leaf is typically flushed red, and this colour suffuses through the whole leaf in bright light. In other forms, maroon banding of varying widths and density occur on both leaf surfaces. The banding takes on a “speckled” appearance in some forms. In



Vr. 'Zapita'



Vr. glutinosa

others, narrow white bands occur.

Many of these forms have resulted from intensive selection programs undertaken by nurseries on seedlings of this species. Some of the more desirable forms are labelled (at least in Queensland) as: *fosteriana* var *seideliana* ‘Red Chestnut’, *fosteriana* var *seideliana* f. *rubra*, *fosteriana* ‘Bianca’, *fosteriana* ‘Megan’, *fosteriana* ‘Speckles’, and *fosteriana* ‘White Lighting’. See photographs on p.18.

Typically, the plants have a floral scape about 100 cm long at the end of which there are about 30 flowers spread over a distance of around 50 cm. The plants produce seed quite readily. These plants will take more light than the other foliage vrieseas described in this article. They have been extensively used in hybridisation programs. Spectacular examples include: ‘Snows of Mauna Kea’, and *hieroglyphica* x *fosteriana*.

gigantea. About 30 leaves, 7 to 10 cm wide at their base, form a large rosette up to 100 cm across. The dark green leaves are marked with a network of light green, particularly towards the plant’s centre. The leaves are quite thick. In the plant described as *gigantea* v. *seideliana* (once known as *tesellata* ‘Nova’) the leaves have white blotches, particularly towards their base, on a light-dark green background. Because of this feature, v. *seideliana* is the better plant to grow. The 150 cm tall inflorescence, which can be branched, has small yellow-petalled flowers scattered along it.

glutinosa. Many of the plants labelled as *glutinosa* are, actually, hybrids of this species. The 60 cm long, 7 cm wide, leaves are quite erect in appearance and form a fairly tight rosette, about 50 cm wide and 70 cm tall. The leaves are light green in colour with wide maroon bands, usually on the leaves’ tower surface.

The multi-branched inflorescence can

reach 120 cm in length and rises well above the plant’s centre. Each branch is 30 to 40 cm long, about 7 cm wide, and a “glowing” red to orange in colour. However, there appears to be a lot of variation between plants (clones). The plant produces adventitious pups, as well as being an “upper pupper”.

There is a variegated form, which is about half the size of the non-variegated plant. It is very rare.

hieroglyphica. Up to 40 tightly packed leaves, 10 cm across, form a large rosette up to 150 cm in diameter and 100 cm tall. The shiny, bright green leaves are marked with wavy bands, which are black to purple in colour. Both leaf surfaces are marked in this manner. The 100 cm high, branched flower spike has up to 50 yellow-petalled flowers scattered along it.

This plant can be quite particular as to its growing conditions and even experienced growers can have difficulty with it. However, it thrives once grown in a spot that meets its requirements.

‘Highway Beauty’ About 30 leaves, 4 cm wide, form an open, tank-type, rosette about 70 cm wide and 30 cm high. A broad, cream coloured stripe runs length-wise up the centre of each dark green leaf. Each leaf is “flushed with red” for about half its length, commencing at the leaf’s base. (In young plants, the percentage of leaves coloured in this manner can reach 80 to 100%).

A multi-branched, 30 cm long inflorescence, with about 30 flowers spaced along it, occurs at the end of a 50 cm floral scape.

Unlike some variegated plants, the pups nearly all have good variegation. The plant is a “generous” pupper, with my specimens producing five pups without any special care.

‘Jeanies Feather’ (Sometimes labelled, incorrectly, as ‘Jeanie Arden’) About 20, 3 cm wide, leaves form a semi-erect

rosette approximately 30 cm across. The leaves' lower surfaces are maroon, as are the inner portions of their upper surfaces. The remainder of the leaves' upper surfaces are green. The pale red, sword-shaped inflorescence rises well above the plant's leaves. It is about 25 cm long and 7 cm wide.

malzinei About 15 leaves, 4cm wide at their base, from a semi-erect rosette about 50cm wide. The leaves' lower surfaces are coloured purple-red, and, in some plants, the upper surface is a similar colour, especially at flowering. In other plants, the leaves' upper surface is green.

The 1 cm wide, rounded flower spike, about 30 cm long, rises well above the plant's leaves. Colouration of the spike can be yellow, brown or bright red. The petals, which protrude about 2 cm from the spike are creamy-white.

'Midouri' Unreg. Numerous, 6 cm wide, leaves form a semi-erect rosette approximately 80 cm across. The green leaves have white striations and markings, particularly towards the plant's centre. The inflorescence is similar to that of *V. fosteriana*.

ospinae. This plant readily forms a clump within two years. Each plant has a distinct stem covered in about 30 leaves that are about 5 cm wide at their base. The plant's width is about 50 cm. Both leaf surfaces have a network of thin dark green lines and small "splotches", on a light green background. The inflorescence is a multi-branched spike. Each branch is yellow in colour, about 30 cm long and 3 cm wide. The pups occur along the plant's stem.

ospinae var gruberi. This is quite a different plant in appearance to ospinae. The 10 cm wide leaves form a tank-type rosette up to 70 cm wide. The light green leaves are marked with dark green to dark brown bands and lines. The dark brown colour is more pronounced on the leaves' lower surfaces. The

inflorescence is similar to that of *ospinae*.

platynema var variegata Like *V. fosteriana*, this species has been subject to considerable selection by nurseries. There are seven botanically - recognised varieties, and many more labelled incorrectly as other varieties.

Typically, the plant has about 20 leaves, 7 cm wide at their base forming a rosette about 60 cm across. The ends of the leaves have large, dark red tips. The underside of each leaf is maroon-red in colour, while the upper surface has faint wavy green lines on a green background. In good light, the leaves' upper surface becomes suffused with red. The inflorescence is similar to that of *V. fosteriana*.

This species, along with *V. fosteriana*, has been used extensively in hybridisation programs.

'Rafael' This plant is a variegated form of *V. philippocoburgii* that was described earlier. The green leaves have central, cream variegation of varying widths. It is very rare.

saundersii. About 20, 4 cm wide, tightly packed leaves form a flat rosette about 50 cm wide and 30 cm high. The blue green, succulent-like, leaves are densely spotted with small maroon spots on their lower surface and lightly spotted on their upper surface.

A branched, arching spike about 30 cm long forms at the end of a 30 cm long floral scape. The fifty or so flowers are scattered along the spike.

This a hardy plant which grows well with little attention.

splendens. This species has been the subject of intensive breeding by European nurseries. This has taken place over 150 years. Some of the named variations include: Major, Flammendes Schwert, Chantrierii, and Splenereit.

Typically, about 15 leaves form an

Vriesea Culture

(By Polly Pascal)

erect, relatively open rosette up to 60 cm wide and 50 cm high. The leaves are light green to dark green in colour, with dark green to maroon bands on both or only the lower, leaf surface.

The inflorescence is a sword shaped inflorescence up to 70 cm long and 7 cm wide. It is bright red to orange in colour. Some inflorescences are multi-branched. This species is an “upper-pupper”.

This plant can be cold sensitive. There are several variegated forms of this species, although they are quite rare.

sucrei Up to 30, 3 cm wide, leaves form a 25 cm wide rosette, about 15 cm high. The leaves' upper surface are coloured a leathery green, while the lower sides are dark purple. When the plant is held up to the light, it almost “glows”.

The 20 to 30 cm long, red, sword-shaped inflorescence occurs at the end of a 30 cm floral scape. The flowers have yellow petals. About four pups are produced at the plant's base.

There is a variegated form of this species, but it is very rare-see its photograph on p.HH

‘Zapita’ Numerous, 4 cm wide, leaves form a 40 cm wide erect rosette. The green leaves have numerous, narrow, dark green lines and markings. In good light the leaves' lower surfaces, and the plant's centre, turns pink-red. The inflorescence consists of a few flowers spread out over a 40 cm long scape.

Acknowledgements

I thank Doug Upton and Ross Stenhouse for taking the photographs used to illustrate this article, and Len and Olive Trevor for supplying many of the photographed plants. This is an expanded version of articles that appeared in certain 2004 editions of Bromeliaceae.

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Editorial comment (Bob Reilly): Reprinted, with permission of the Bromeliad Society International, from the Journal of the Bromeliad Society, January-February 1991, v. 41 (1), pp 32-33. This article contains some tips on growing vrieseas from a Florida (United States of America) grower.

The most colorful of the wet-growing vrieseas come from Brazil and the family color id yellow. The plants are epiphytic and need good air circulation and good drainage; the thin-leaved vrieseas like shade and lots of water. To provide good drainage put rocks in the bottom and drainage holes in the sides or bottom of the pots.

There are three ways to water vrieseas: the entire plant and potting mix, just the plant, or misting the foliage.

In fertilizing, use not more than 1 to 1.5 teaspoons of mix to 5 litres of water. If Osmocote is used as a pot feeder, go very easy on the amount used. Vrieseas respond to foliar feeding but use one-half strength and do it more often, early in the day or in late afternoon in the summer months, once a month. Add enough to have the cup overflow.

Avoid having floppy lower leaves on your plants. There should be a corresponding relationship between plant and flower spike. If the plant is starved it produces a short and skinny flower spike.

There are exceptions to the (*wet-growing*) rule and the following vrieseas are drier growers: *V. fosteriana* ‘Red Chestnut’, *V. gigantea*, *V. gigantea* var. *seideliana*, and *V. saundersii*. *V. splendens* and similar species are cold sensitive. Vrieseas seldom ever get fly speck scale. Brown speck scale may come from overcrowding. They can be grown outdoors.



Vr. hieroglyphica



Tillandsia streptocarpa

How Did I Do It?

(by William Rogers)

*Editorial comment (Bob Reilly) Reprinted, with permission of the New Zealand Bromeliad Society, from the Bulletin, January 1979, p.10. Some people seem to always have lovely plants. In this short article a New Zealand grower describes how he achieved this with *V. hieroglyphica*.*

I have been asked why I always manage to have a really nice big plant of *V. hieroglyphica*—if a trifle on the green side.

I grow it on a covered verandah where it gets a trifle too much shade. As far as size goes, I keep a succession of plants, usually three. As soon as my first purchase gets sizeable, I buy a baby one. Then, when the big plant flowers I buy another baby one. So, I have a succession, with one plant near flowering, one medium sized one and a smaller one. Small plants are fairly easy to obtain at larger nurseries during the summer months.

I feed the plants very occasionally once they are past baby size. They receive just enough to keep them going without losing too many bottom leaves. About once every two months is enough.

I usually feed the smaller plants once a month during summer with a teaspoonful of Lush, Miracle Gro, or seaweed. They receive about half strength fertiliser until the leaves get about 15 cm long and start to harden.

This method of growing could apply to other foliage vrieseas too, if they are available—such as *V. fenestralis*.

The BSQ Web Site

Don't forget that the society has an web site. We place urgent information and information that is not suitable for inclusion in Bromeliaceae is on the site.

www.bromsqueensland.com.au

Elisa Doolittle of the Thorn Scrub

by Chet Blackburn

*Editorial comment (Bob Reilly) Reprinted, with permission of the Bromeliad Society International, from the Journal of the Bromeliad Society, September-October 1996, v. 46(5), p.231. Chet Blackburn is a former editor of the Journal, and in this article he provides a somewhat humorous "salute" to a relatively common, but often underrated, tillandsia i.e. *T.streptocarpa*. A photograph of this plant appears on p.24*

"Descript" is a word that ought to exist, but doesn't. Logically, it would seem that if a plant can be described as nondescript out of bloom, when it comes into bloom, and the bloom is attractive, then it ought to be called descript.

Nondescript aptly describes *T. streptocarpa* out of bloom. The plant forms small clumps of silvery, twisted, narrow leaves growing among thorny bushes on hillsides or in open woodlands in semi-arid regions of Peru, Bolivia, Brazil, and Paraguay. The appearance of the countryside can be deceiving, however, as it is often a surprisingly humid environment.

The species is almost as variable as it is widespread. The individual leaves are deeply channelled, usually recurved, and oddly twisted in appearance.

When a clump is mounted on a piece of driftwood in cultivation, it always looks as if it had been thrown against the wood with a great deal of force, and simply went "splat" in the final arrangement of its' leaves.

Yet, even without the assistance of Professor Henry Higgins, this ugly little duckling becomes a swan when the flowers emerge.

The attractive, violet-blue, slightly fragrant flowers with spreading petals are large in relation to the plant, and there are usually several flowers open at the same time along the branched inflorescence. They also bloom over an extended period as an added bonus. It is said to bloom from March to May in the wild, but doesn't stay confined within these boundaries in cultivation.

The species name *streptocarpa*, is derived from the latin words "strepto" meaning twisted, and "carpa" meaning fruit. If you grow other tillandsias successfully, you'll have no trouble with this one. As with most tillandsias, it needs bright light, good air circulation, and an occasional soaking followed by a longer period of being dry than wet before being soaked again. The frequency of the soakings, depends, of course, on the weather conditions.

It is readily available from growers and reasonably priced. It belongs in any collection of tillandsias, especially during its "descript" periods. "With a little bit of luck", you'll grow accustomed to their face.

My Favourite Bromeliads

by Frederick H. Gerber

Reprinted, with permission of the Bromeliad Society International, from the Bromeliad Society Bulletin, May-June 1962, v. XII (3), p.58.

If I could have but one bromeliad which one would it be? This is a hard question to answer as so many do well and have different virtues. Nothing in our estimation gives the year-round satisfaction of the coloured foliage forms of the neoregelias. Nothing is quite so flamboyant as the ephemeral inflorescence of *Billbergia pyramidalis* that grows almost as well as the weeds in the shady

spots in our garden. Little can challenge the remarkable color combination of the *Portea petropolitana* var. *extensa* spikes that have been going strong for months. And who can describe the satisfaction, day after day, of many of the vrieseas when one has flowered them himself.

We would be loath to part with *Quesnelia marmorata* even though it's a shy bloomer, but it is so architectural and rich of texture. *Ae. orlandiana* and *Ae. 'Bert'* are always a pleasure with their splendid foliage markings. We think that the latter is the richer and more durable of the two.

Instead of one bromeliad, we could perhaps limit ourselves to perhaps ten, which might be: *Guzmania lingulata*, *Vriesea 'Marie'*, *V. incurvata*, *Portea petropolitana* var. *extensa*, *Neoregelia marmorata* crosses, *Neoregelia caroliniae*, *Quesnelia marmorata*, *Ae. bracteata*, *Ae. chantinii*, and *Ae. miniata* and its hybrids.

Jungle Survival

by Mulford Foster

Reprinted, with permission of the Bromeliad Society International, from the Bromeliad Society Bulletin, September-October 1961, v. XI (5), p.73.

Adaptability and the will to survive are the outstanding qualities of many bromeliads, especially when they are in their own in native tree haunts.

About a year ago, I fastened a rather poor specimen of *Billbergia horrida* in the crotch of one of our live oak trees. The bromeliad had no active live roots at the time, but as soon as the rainy season came on the roots began developing and the plant perked up with new vigour. However, before the roots had developed sufficiently to support the plant well enough to withstand a heavy wind or fallen branch, the calamity happened and it

was blown over, but not from its perch.

Soon a new offshoot started to develop at the base and now a good strong offshoot is holding on with its newly formed roots. The leaf cup carries its own water and *B. horrida* is back on the job.

During this period of the survival-test, a strand of *Tillandsia usneoides* (Spanish Moss) was blown from a nearby tree onto the rough bark; it began holding on without the assistance of roots.

Although both of these bromeliads start out with roots in their juvenile stage, the billbergia will always depend on its roots for food or for attachment or both, but *T. usneoides* continues to survive and grow on to untold lengths without the assistance or necessity of roots. It drapes, but does not cling with roots, after it matures from the juvenile form.

Bromeliads have what it takes to survive not only in the forest jungle, but in the homes of enthusiastic lovers of plant beauty and form.

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The Bromeliad Society of Queensland is happy to announce the publication of "Starting with Bromeliads", a book targeted at the beginner to immediate grower of Bromeliads.



The book is 100 pages in length and contains over 200 colour photographs of bromeliads and covers such topics as plant descriptions, caring for bromeliads, and landscaping with bromeliads.

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What Plant is That?

Author: Ross Stenhouse

One of the hardest things to achieve in publishing a magazine such as “Bromeliaceae” is to get the plant names correct for the images we publish. The readership of this journal contains a number of experts and it can be embarrassing to get an email, a week or so after publication date telling us that we ‘Got it wrong’!

Sometimes we publish photos and at the last minute, we suspect that we may have an incorrect caption for a image. As a result, we publish that image under a generic caption such as *Aechmea* Hybrid.

Such was the case in the last issue. In that issue on page 43, top right, we published an image which we are now able to report is *Aechmea* ‘Reginaldo’. Interestingly Geoff Lawn noticed the caption and volunteered to write an article on *Aechmea* ‘Reginaldo’ and *Aechmea* ‘Reginald’ (see page 32 for his excellent article).

The ways the images become unidentified are many and varied, ranging from me not being able to read the notes taken when the plants were photographed, to the plants being unidentified at the time they were photographed. As an example, the plant on the page opposite, bottom left (3), was purchased by me from the sales table at a BSQ monthly meeting. It was labelled simply *Aechmea* species.

Unfortunately, I know from my own experience with potted bromeliads, that the labels seem to get removed or misplaced when repotting. More frustrating is to find that the permanent marker that you have used to mark the labels, was not so permanent and that the name has washed off or faded on the label.

I have noticed that a 2B lead pencil seems to be very suitable for marking labels.

It has the added advantage that with a bit of hard rubbing it can be ‘rubbed off’ and the plastic tag reused.

I thought it would be interesting to publish some images where we are unclear as to their correct name ask the readers to venture a the names for some or all of them. I have had a couple of experts give their opinion and have used that as the the starting point for the names. That name is just to get you thinking. We are interested in hearing what readers think they are called.

Now as we all know ‘Experts’ often get things wrong, so there is no ‘loss of face’ in putting forward your opinion and finding that you may wrong as well!

In this article I have set up a little quiz, using images that have a bit of the kind of history referred to above; here is what we have been led (by being told or by plant labels) to believe the plants may be.

Checking the www.fcbs.org photo index is always a good starting point and it shows that some are not what we thought they were. We have numbered the images to make it easier to refer to a particular one.

Below are names we currently have for the images. We are unsure of their accuracy and welcome your input:

1. *Ae. cylindrata*
2. *Ae. ‘Gaiters’*
3. *Ae. species*
4. *Neo. ‘Sarmentosa’*

Email in your opinion on what you think each is called, you may only know one, or you may know the lot. In the next edition I will collate the opinions and publish the results. All entries will remain anonymous. This article has been prepared both as a learning exercise and one that produces a useful result, so join in and have some fun as well.

I hope that you have some fun and I will gain an insight into the correct names for the plants shown in the images.

(1)



(2)



(3)



(4)

Consider Growing Vrieseas

by Ervin Wurthmann

Editorial comment (Bob Reilly): Reprinted, with permission of the Bromeliad Society International, from the Journal of the Bromeliad Society, May-June 1995, v 45 (3), pp110- 112. Ervin Wurthmann grew, and hybridised, vrieseas in southern Florida in the United States of America. Growing conditions there are similar to much of coastal, southern Queensland, although freezing weather occurs periodically. When Mr. Wurthmann wrote this article, the genus Alcantarea was still part of the genus, Vriesea. The current genus name has been included in the text, where needed.

Vrieseas have enjoyed popularity in Europe for over 100 years. Demand for these plants has fostered many hybrids, of which many are still in the trade today. Vrieseas vary in size from less than six inches in diameter to a size with a spread of over five feet. The smooth-edged leaves may be spotted, blotched, or barred with eccentric markings. The inflorescence usually bears a flattened or distichous spike with yellow, red, green, or purple bracts while remaining in color for several months.

CULTURE

Light. Vrieseas are not hard to grow. They do not require as much light as the neoregelias but will thrive under higher light conditions than once supposed. Some of the vrieseas with thin, green leaves will take on a rose or dark purple hue at the base if the plant is grown as bright as 65% shade on an all-day basis.

Soil mix. Soil mix should be well drained to permit frequent watering, which vrieseas prefer.

Potting. I am not an advocate of over-potting having flowered *Vriesea hieroglyphica* in a 5 inch pot. It is well to add turkey grit or fly ash if you wish to grow *V. fosteriana*, *gigantea*, *gigantea var. seideliana*, *hieroglyphica*, (*Alcantarea*) *imperialis* in a situation where ample watering occurs.

Feeding. Most vrieseas require a higher level of feeding to grow a top quality plant than do neoregelias. It can be accomplished by top-feeding on the medium with Osmocote, Sure Gro, or Nutra Coat, all slow-release fertilizers that provide long-time feeding. Soluble fertilizers may be used when watering.

Pests. Pests are few. Soft brown scale can be controlled with Diazinon, Cygon, or Orthene. Occasional fungus can be handled with Dithan M-45, Captan, or Banrot. Read labels thoroughly as dosages will vary according to the material used.

Applications. Small vrieseas are ideal house plants because they will endure relatively low light conditions and are not demanding in terms of temperature and humidity. The more closely the grower can meet ideal light and humidity the more attractive will be the plants. Most are rewarding with their inflorescences that retain their bright colors for many weeks. Many vrieseas are satisfactory bedding plants where the winters are mild and moderate shade can be provided. Some of the larger varieties such as *Vriesea altodaserrae*, *atra*, *neogluinosa*, *phillipocoburgii*, *tuerckheimii* and *Alcantarea edmundoi*, *imperialis* and *vinicolor* would do well with almost full sun in frost-free areas.

SELECTION

After reading price lists and visiting collections you may want to make a list of the plants you would like to have. Aside from the matter of size, which may be the main consideration, there are other things to think about such as special requirements for air

circulation and protection from cold. In some cases there may not be enough information about which plants are cold hardy and which ones are not. In such cases you may have to guess, or resort to learning where plants came from and how high, how dry or wet the original growing conditions. The easiest is cold-hardiness so we will begin there.

Cold Hardy. Nearly all of the Brazilian species and their hybrids possess considerable cold tolerance. Many of them are as tough as neoregelias and can be grown outdoors in the Tampa Bay, Florida area.

The most cold tolerant ones are those with green leaves. They include:

Vriesea altodaserrae, *atra*, *bituminosa*, *bituminosa* var. *minor*, *carinata*, *ensiformis*, *erythroductylon*, *flammea*, *friburgensis*, *incurvata*, *phillipo-coburgi*, *platynmea*, *psittacina*, *rodigasiana*, *schwackeana*, *simplex*, and *vagans*.

Species somewhat less tolerant of cold include those with more decorative foliage such as *Vriesea fenestralis*, *fosteriana*, *gigantea*, *gigantea* var. *seideliana*, *hieroglyphica*, *saundersii*, *tuercheimii* (from the Dominican Republic was collected by the author in an area where frost occurred) and *Alcantarea imperialis*.

Vriesea heterostachys, *racinae*, 'Red Chestnut', and *sucrei* are reasonably cold hardy, but should be protected from frost and subfreezing temperatures.

Not cold hardy. Central American and northern South American vrieseas are for the most part not cold hardy. These varieties will require greenhouse protection during the colder months. They include: *Vriesea chryso-tostachys*, *glutinoa*, *heliconioides*, *malzinei*, *rubra*, and *splendens*.

The really challenging group. Another group for which, unfortunately, there is no record of hardiness in Tampa, Florida are those of the gray-leaved types, which some-

what resemble tillandsias. These vrieseas are frequently xerophytic in their native habitat and for that reason require a different method of culture. *Vriesea appenii*, *barclayana*, *chontalensis*, *cylindrical*, *espinosae*, *heterandra*, *hitchcockiana*, and *rauhii* are best mounted on cork bark, tree fern plaques, or some kinds of wood. Occasional spraying with a dilute, soluble fertilizer is beneficial. Since some members of this group are from high altitudes it is possible they may be somewhat cold hardy.

A real challenge to vriesea culture is the group sometimes known as the thecophyllid vrieseas. These occur in the higher rain belt of Costa Rica, Guatemala, Honduras, Panama, and the Caribbean islands. Species such as *Vriesea leucophylla*, *ororiensis*, and *sintenisii* have spectacular inflorescences while *V. montana* has sensationally coloured foliage.

Cultivation of this last group is difficult and almost impossible in warm, humid areas. I have seen very presentable specimens in California. These plants prefer to be mounted on wood so that there is ample air drainage around the roots. A greenhouse with fan and wet wall cooling will enhance your chance of getting them to survive. They should be watered only enough to keep them from dehydrating. It is not likely they will tolerate any degree of cold.

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Little “o” makes a BIG DIFFERENCE

by Geoff Lawn

In the last Bromeliaceae issue (July/Aug. 2006) in Bob Reilly’s excellent article “Growing Aechmeas” (starts p.38), a correct description was made of *Aechmea* ‘Reginald’ (p.44) but the accompanying photo captioned “Aechmea hybrid” (p.43) is actually *Aechmea* ‘Reginaldo’, also a variegate but completely different.

To hopefully avoid further confusion, both their photos and details are here for comparison.

Aechmea ‘Reginald’

A grey-green open rosette up to 50cms. diameter and as tall, sometimes heavily scurfed on upper and lower surfaces; almost spineless soft pliant arching leaves with central cream stripes or striations (medio-picta form), the reverse is maroon red. Summer-blooming, the erect compoundly-branched inflorescence is a panicle of globose (rounded) coral red berries and cornflower blue petals. Cold-sensitive, it has been incorrectly grown for years as “*Ae. fulgens* var. *discolor variegata*”, for this species’ inflorescence is branched at the base only and has ellipsoid-shaped berries. Luther (1992) stated that ALL the variegated cultivars grown as *Ae. fulgens* appear to be hybrids. *Ae.* ‘Reginald’, developed before 1980 by Deroose & Waterschoot, was named by Albert Deroose for his son Reginald Deroose and finally registered in 2003. It is actually a sport off *Ae.* ‘Maginali’ (*Ae. fulgens* var. *discolor* x *miniata* var. *discolor*), the latter bred by Florida grower Julian Nally in 1954.

Aechmea ‘Reginaldo’

A largish, mid-green upright rosette up to 80 cms. wide by 80cms. tall with broad cream-margined stiff finely-spined leaves.

Depending on culture/climate, some scurf and faint crossbanding on the reverse are visible. The upright, extended candelabra-like spike has amaranth scape bracts and ovaries with blue petals. It arose (probably by tissue culture), but was not commercially released, as a variegated sport from *Ae.* ‘Romero’ before 2001 by Reginald Deroose of Deroose Nursery, Belgium. Reginald says the sheer volume of commercially propagated *Ae.* ‘Romero’ produced occasional variegates (pers. comm. Aug. 2006). *Ae.* ‘Romero’ (*Ae. fendleri* x ‘Perumazon’) was bred before 1979 by Francis Buysse at the State Research Station of Ornamental Plant Growing at Melle (near Ghent), Belgium. *Ae.* ‘Reginaldo’ is cold-sensitive also because it’s parent *Ae.* ‘Perumazon’ is a wild-collected, non-branching form of *Ae. chantinii forma amazonica*. The cultivar namer and identity namesake behind *Ae.* ‘Reginaldo’ remain a mystery despite my enquiries with several big commercial growers involved.

So remember to add that extra little “o” ending to your label if appropriate for these two attractive cultivars with long-lasting inflorescences.

References

BSI Cultivar Registry Online 2006: <http://bsi.org/>

Butcher, D. 2004. BSI Journal. 54:1:27. Cultivar Corner--*Aechmea* ‘Reginald’.

Luther, H. 1992. BSI Journal 50:1: 8. Misnamed Bromeliads, no.10. *Aechmea fulgens* and *Ae. miniata*.

Samyn G. & F. Thomas.1997. BSI Journal 47:3:120. Thirty Years of Bromeliad Breeding at the Research Station of Ornamental Plant Growing at Melle, Belgium.

Inflorescence: The part of the plant that holds or contains the flower or flower cluster: the mode of flowering.

Ae. 'Reginald'
Photo D Cathcart



Ae. 'Reginaldo'



Tillandsia ionantha 'Druid' cv 'Pink Champagne'

Radical Reds

Revisited

by Geoff Lawn

Since I wrote about Radial Reds in 1986 considerably more cultivars have been bred or developed among this select group admired for their beautiful red-lined foliage. Termed botanically as vertical cyanic pin stripes, these longitudinal red lines have anthocyanin-laden epidermal cells extending from their leaf bases for various distances along the blades. Both upper and lower leaf surfaces are usually involved, as evident in *Tillandsia cyanea* and *Guzmania lingulata*, two species not normally considered striped. The purpose of these pinstripes is not fully understood but it is believed to assist photosynthesis and possibly carbon gain.

From imported seed *Aechmea* 'Kiwi' is a New Zealand-raised form of *A. fasciata* with grape red striations, silver crossbands and a paler pink inflorescence than usual. Probably the mutation evolved from a seedling meant to become var. *purpurea*. *Aechmea* 'Electrica Redline' is a tissue cultured mutant with red-lined foliage reverse from *A. 'Electrica'*. Unfortunately this sport is prone to distorted inflorescences. A sport from *A. 'Foster's Favorite'* is 'Red Ribbon', a rather soft, mossy green rosette and striated reverse, together with the pendant spike of ruby berries. *Cryptanthus bivittatus* 'Ruby' is an attractive small star-like flat rosette with double crimson stripes per leaf and a central cluster of white flowers.

Basic green comes alive when marked with red and numerous similarly thin-lined neoregelia hybrids abound, each with subtle differences emanating possibly from only two or three common ancestors--*Neoregelia* 'Rosea Striata', *carolinae* and *carolinae* hy-

brid. *N. 'Rosea Striata'*, renamed in the BSI's Bromeliad Cultivar Registry, is an enigma and was never defined. It was often listed as a form of *Neoregelia carolinae*, which may be correct, though one clone's inflorescence and plant form was linked to *N. farinosa* by the Bromeliad Identification Centre. Thus there is confusion amongst growers and uncertainty whether quoted parents in relevant crosses are accurate. 'Rosea Striata' may be an open rosette of few but strap-like leaves lined red with a pinkish red centre or more a smaller multi leaf-layered and compact rosette like "meyendorffii". According to the Bromeliad Cultivar Registry progeny bred from 'Rosea Striata' include *N. 'Aristocrat'*, 'Boldstreak', 'Eleganza', 'Electric Red', 'Royal Salute', 'Stardom', 'Sultan', 'Sultana', 'Sundowner', 'Sundowner Delight', 'Sundowner Queen', 'Triumph' and 'With Love'. Their cup colours range from mid-pink to dark red and the leaves are finely spined. Few are farinose (dusty leaf surface or scape bracts) to any degree but one noted exception is *N. 'Bird Rock'*.

Medium-sized, as are most cultivars featured here, *Neoregelia* 'Burbank' from Queensland's Burbank Nursery is considered a *Neoregelia carolinae* cultivar. Its wire-thin red lines upon bronze green leaves are complemented by scarlet scape bracts. *N. 'Burbank'* is parent to 'Fireworks', 'Jet Age' and 'Red Romance'. More complex crosses in this mould with known parentage include *N. 'Champagne Romance'*, 'Grace Darling' and 'September Eleven'. Crosses using *Neoregelia concentrica* created broader, leathery-leaved rosettes with some purple barring, fine lines and purplish red nests, such as *N. 'Rob Roy'*, 'Rosa Delight', 'Rosa Deluxe' and 'Rosa Yvonne'. Red flecking and pink or red "fingernails" are extra features bred into some of these hybrids, though excellent culture and climate invariably show their full



Ae. 'Kiwi'
Photo D Butcher



N. 'Pimiento'
Photo H. Plever



A. 'Red Ribbon'

Photo H. Plever

potential also. Others with unidentified *N. carolinae* cultivars or hybrids in their background which produce fine red lines include *N.* 'Jimmy Scott', 'Mary's Favorite', 'Nina Rehak' and 'Pin Stripe', all with cup colour. Outcrossing can produce unusual combinations as with *N.* 'Allan Freeman' ('Grace Darling' x 'Princess Grace') sporting red stripes overlaying a candy pink base colour.

A third group of neoregelias produce irregular random red to chocolate stripes of varying widths. *Neoregelia carolinae* produced a striking sport in its offspring, *N.* 'Peppermint Stick', a chocolate-striped rosette with carmine bracts. A frustrating, unstable plant for some growers, new pups often revert to all-green. It's sibling *N.* 'Peppermint Candy' is similar. One dark sport of the variable *N.* 'Amazing Grace' ('Vulkan' x *carolinae* hybrid) is more consistently wide-striped reddish-brown. *N.* 'Maya' ('Catherine Wilson' x *carolinae*) is a lime green rosette with central reddish brown stripes in medio-picta form, but no flushed centre. Raised by Shelldance Nursery from the BSI Seedbank is the unusual *N.* 'Shelldance' (reputedly 'Fairy Paint' F2) with wavy, bronze green tapering leaves edged brick red in strong light.

A race apart, variegates with albino tissues generally produce pink pigment overlaying the white rather than red, a seasonal colouring unless one lives in the tropics or sub-tropics where these stripes are more intense and permanent. However culture, particularly the duration and intensity of available light, plays a key part. *Aechmea* 'Foster's Favorite Favorite' is fairly reliable in temperate climates, especially the blackish-wine leaf Australian clone with the rosy-red margins. *Aechmea* 'Purple Heart' (*A.* 'Mirlo' variegated) is a sure winner with red lines in medio-picta form, running along the burgundy leaves. Many neoregelia variegates are capable of producing red stripes,

more so those which have a dark foliage base colour. The celebrated *Neoregelia* 'Perfection' is another stunning bromeliad with brilliant central cherry red bands overlaying the plum foliage in bright light. *N.* 'Kahala Dawn', 'Pemiento', 'Red Pride' and 'Zoe' are similarly marked. *N.* 'Mixed Emotions' suffuses blood red all over the obverse, contrasting with irregular cream stripes beneath. *Werauhia* 'Edna Shiigi' is a median scarlet-streaked variegate which arose as a chance seedling from normally solid maroon *W. sanguinolenta*.

At their flowering peak, red-lined foliage bromeliads are a joy to behold, particularly the neoregelias whose glowing hearts and out-spreading foliage rays of colour remind one of a summer sunrise. Growers can count on a few of these striped types to light up any bromeliad display or collection and their inflorescences are an extra bonus. Certainly a good specimen gives the impression of a red plant sporting green stripes and vice versa, a remarkable phenomenon in a predominantly green plant world.

References

Benzing D. 1980. *The Biology of the Bromeliads*. Mad River Press Inc. Eureka, California.

BSI Bromeliad Cultivar Registry online and Photo Index link. 2006. Florida Council of Bromeliad Societies Website: <http://fcb.org/>

Lawn G. 1986. "Radial Reds", Bromeliad Newsletter, March 1986 (vol. 4, no. 3). Bromeliad Society of New South Wales.

Luther H. 1988. Misnamed Bromeliads, 1. *Neoregelia carolinae* "var. roseostriata". *J. Brom. Soc.* 38:5:209

Orthophytum: This small genus consists of sixteen semisucculent plants that grow in clusters on rock edges. Described by Beer in 1854, the name comes from the Greek refers to the erect inflorescence.



N. 'Maya'
Photo H. Plever



N. 'Alan Freeman'
Photo A. Freeman

Why Alcantarea's lean?!

by Mark Paul

The Genus *Alcantarea* has some of the largest members of the Bromeliad family growing to 2mx2m dimensions with a 3m inflorescence. There are 16 described species, all from eastern Brazil.

I have grown *Alcantarea* for over 15 years now in the ground and in containers, from seed and offset, through innumerable increases in pot sizes as they expand impressively towards their mature dimensions and flowering. Every re-pot of course you re-centre and align your plant to no avail, they invariably lean to one side of the pot. Rotating the plants as they grow minimises this, but eventually the common phenomenon of counter balancing plants with concrete blocks or bricks to one side of the pot in semi maturity and maturity, reinforces the point *Alcantarea* lean!?

In May this year I had the opportunity to visit Brazil specifically Rio de Janeiro and Minas Gerias States, and visit a number of *Alcantarea* species growing in habitat. This habitat unbelievably is granite cliff faces exclusively, their bleached skirts of dried leaves visible at great distances, and in great numbers.

On closer inspection, I realised that they all lean into the cliff face to spread the substantial (60+ litres) water bearing loads, later inflorescence + wind loads towards and onto the cliff face. Even on less acute cliff faces and in cultivation on hillsides they lean acutely towards the slope (here they look like they need straightening).

Local rock climbers and abseilers use *Alcantarea* as secure foot and hand holds.

Some of the stolons from past growth observed in *Alcantarea glaznouiana* and

roberto kautskyi were a metre long. A nutrient impoverished environment means a long time to flowering.

Visiting Petropolis in the Organ Mountains behind Rio de Janeiro the diversity of colours and forms in *Alcantarea imperialis* were amazing (particularly being used to seeing comparatively few clones of the species in cultivation) from blacks to reds to greens and two-tone colours. Massive plants with huge stacks of leaves, smaller compact plants with fewer leaves. Broader leaves, finer leaves and pointier and rounded (recurved under) leaf tips. Blotched pigmentation and variegates reasonably common in cultivation in Brazil, were easy to see on the cliff faces on wet overcast days.

Climbing to the peak of Mt Sino in the Organ Mountains, above Petropolis, *Alcantarea imperialis* dropped out at about 2,000m (although there were still *Vriesias* at the 2,400m peak, a 5hr walk up).

Looking out along that immense chain of mountains stretching as far as you could see in both directions, each exposed cliff face was plastered in *Alcantareas*.

After coping with the enormity of the view, it made me think of two things, first the diversity within a species possible from wild collected seed, and the diversity of *Alcantarea* species certainly not yet scientifically described as reflected in some of the 'different, non-conforming forms' of *Alcantarea* we grow at home "all leaning of course", probably from seed sent from here in the 1940s and 1950s. But at least now I understand why they lean. The other thing was that the sun was setting + we still had to get down, that's when we started to run.

Thanks to Bob Christoffel, Arno King, Bruno Rezende Silva, Bruce Dunstan and Peter Tristram. The growing friends propagate five species of Alcantarea, extensa, geniculata, glaznouiana imperialis + vinicolor in



small numbers.

Mark Paul is a Sydney based horticulturalist, landscape + greenwall designer with a specialist interest in epiphytes.

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Vriesea 'Jeanie' now 'Jeanies Feather'

by Derek Butcher

This was what was known in Australia in 2003

"This is a John Arden hybrid whose parents are 'Van Ackeri' x 'Brentwood'. This is a complicated hybrid if you want to chase all the generations involved. However, this particular hybrid has a branched inflorescence that resembles the seed parent. The leaves have large areas of deep maroon especially near the base.

There is a plant circulating in Queensland and now elsewhere that has leaves like 'Jeanie' but has a simple spike that resembles *Vriesea erythrodactylon*. When our plant of this name flowered we were worried about its identity and sent a photograph to John Arden for his comments. He did not recognise it as being any of his hybrids and was not able to help us.

This is either a case of wrong identification or a hybrid done and no attempt made to register the name. I have taken the liberty of changing the name to 'Jeanie's Feather' (a minimal change). If you do have this plant would you please change its name. If you know any history or parentage of this cultivar, please advise and the records can be updated."

In September 2006 I noticed the following in the Florida East Bromeliad Society Newsletter and chided Jay Thurrott as to why this had not been named if it was a favourite of Carol Johnson.

"Another interesting plant currently in bloom is *Vriesea erythrodactylon* x *V. sucrei* that came from the Pineapple Place 10 years ago. This is one of those plants that is reliable in that it blooms each year, but never blooms at the same time. One year it may bloom in June, the next year a pup may bloom in September, another year it's April... and so on.

This is one of those crosses that really combines the best features of each parent plant. *Vriesea erythrodactylon* has a very pretty bloom, but the plant has plain, soft green leaves and *Vriesea sucrei* has very nice looking, dark purple (almost black) leaves, but they are so stiff and brittle that I can never keep the plant looking nice.

This cross has the nice looking leaves of *V. sucrei*, but they are wider and softer (so they don't become damaged so easily and always look good) and it has a bloom that looks very much like *V. erythrodactylon*'s but with the coloring of *V. sucrei*'s dark pink to red bloom - all in all a great looking plant and one that the late Carol Johnson called one of her favorite small vrieseas."

Jay said that the plant reminded him of a plant he had seen in the Cultivar Register and came up with 'Jeanies Feather'. We immediately checked our plant with the description and photo from Jay of his plant ignoring the puss! We are convinced they are the same and thanks to international cooperation we have solved yet another Bromeliad problem.

To the Floridians I say note the name 'Jeanies Feather' and to the Aussies I say note the parentage!

Quesnelia: Terrestrial, epiphytic, this genus is endemic to the coast of Brazil. Most are distinguished by their brilliant inflorescences. Described by Gaudichaud-Beaupre in 1844 for M. Quesnel, a French consul in French Guiana

Vr. 'Jeanies
Feather'



Vr. heliconioides



Tillandsia arequitae

Bromeliad Display

by Beryl Batchelor

For The Bromeliad Society of Queensland at the Brisbane Exhibition.

Once again the club had a beautiful display in the Horticultural Section of the Show.

Our display featured the lovely “display” tree Bob Cross made for our Bromeliad Conference last Year. It was filled with Highway Beauty Vrieseas supplied by Brisbane Bromeliad Centre who also supplied a great amount of plants for the display along with the other members involved in the set up. The people who supplied plants deserved a vote of thanks for their effort. There were quite a lot of neoregelias, vrieseas, aechmeas, and guzmanias to name a few varieties as well as a small tree with tillandsias. The Tills really were cause for a lot of interest. The three “balls” of strictas creating great interest.

Olive Trevor made a lovely floral arrangement to be placed in one of the “ladies” we had in the display. These were also made by Bob Cross to hold lights on the back which were used to show off the plants in the tree to the best advantage.

I think people are turning to Broms because of the water situation. One of the first questions asked was “how much water do they need?”

We had eight members in total who were involved in the set up and who supplied a lot of the plants. It is a big job and it was nice to see there were a lot of members involved in manning the stand. We handed out hundreds of flyers to advertise our show at Mount-Cootha in November as well as handing out a lot of our little brochures on cultural notes.

For the members who were involved - well done. For the members who were unable

to help - you don't know what you missed. It is so rewarding to be able to talk to people and promote our beloved plants.

Bromeliad Bromidiums

(by members of the Florida West Coast
Bromeliad Society)

Editorial comment (Bob Reilly): Reprinted, with permission of the Bromeliad Society International, from the Bromeliad Society Bulletin, September-October 1956, v. VI (5), pp. 78-79. While some of the growing “tips” outlined in this article refer to potting mediums that are no longer available, they are included because of their historical interest. Most of the tips, though, are still relevant.

- To increase billbergias, aechmeas, etc. plant them in osmundine, gravel or other porous material at a slight angle to the vertical. Remove the shoots (ie pups-Bob Reilly) when they are as tall as the top of the rosette of the old plant and more will follow.

- Large terrestrials, such as puyas, pitcairnia, and especially Bromelia balansae, look attractive and grow well in large, raised urns—standing in the sun in a warm climate as is done with agaves, yuccas, etc.

- Surgical plasma bottles with tubing can be filled with water and hung over a plant. It is easy to maintain a slow, steady supply of water where it is needed, by adjusting the height and the pinchcock valve.

- When plants are first moved under fibreglass, do not fertilise for several weeks and reduce watering a bit, as they will grow softer at first.

- The shadecloth produced by many different companies is approximately the same in quality. It is the best all-round shade material obtainable; however, the percentage



of shading listed on the grades is far greater than the actual amount. Outside light, in Florida, is more intense than in the northern states (by half again or more) and is also higher than in the misty tropical forests.

- In preparing any soluble fertilizers that are so popular, a dash of vinegar or a small amount of sphagnum or peat should be added to the water before the fertilizer; this will acidify the water and increase its ability to dissolve the fertilizer.

- A little trace of peat added to the water in bromel cups will benefit them.

- Never pot bromels, or other plants, in common soil without sterilizing it.

- Use crock from broken pots or broken up red bricks for drainage; never use lumps of concrete or mortar or gravel—which is often limestone. (This is because bromeliads require acidic soils and concrete, limestone and mortar will make the soil less acidic—Bob Reilly)

- In planting bromels in beds, unless the ground is exceptionally well drained, prepare the surface so that it is 3 to 20 cm above the surrounding level. It is also wise to dig down 30 cm or more and make a layer of broken crock or brick, replacing the soil with a sterilized layer of prepared growing mixture.

- Greenhouses, lathhouses, etc. should be shaded the most overhead and the least on the sides. There is an optimum light intensity for each plant, and best growth comes from 12 to 16 hours of light per day held at this optimum, plus the remaining hours in uninterrupted complete darkness.

- An electric fan that keeps a steady 5 to 10 kph wind on plants in a greenhouse will increase their growth

- Growth may be stimulated by using weak, manure tea, at regular intervals, instead of plain water in bromeliad cups.

- Bromeliads will be encouraged to

reproduce if each side shoot or sucker is removed as soon as it has formed several leaves and has a strong base.

- Always arrange for good drainage when repotting a bromeliad.

- Unnoticed, dead, outer leaves may be removed from a bromel.

- Never place a scale-infected plant among your collection until it has been sprayed with Malathion.

- Mechanical injury or dry, brown areas on leaf tips or edges may be removed by scissors.

- All bromeliads will respond well to repotting if potting medium, such as sphagnum, disintegrates and becomes spongy.

- Copper wires or staples are injurious to bromeliad tissue.

- Never use oil spray on bromeliads.

- It is wise to make several experiments to determine the conditions most suitable for each plant.

Plant Labelling

Aechmea 491

by Ross Stenhouse

In the last issue of Bromeliaceae, the issue of correct “Plant Labelling” was raised. This is always a thorny issue and has great significance when plants are grown in large wholesale nurseries. The case Derek Butcher raised was “Aechmea 491”.

A bit of investigation has unearthed how this plant became into existence. A number of years ago when tissue cultured plants were coming onto the market, Olive Trevor gained knowledge about a particular hybrid that she thought might be of commercial value.

The Trevors’ run a large specialist wholesale nursery and are always on the lookout for interesting plants. The tissue-cultured

spineless beauties that were then becoming available showed great promise.

Olive had some experience in trying to import these types of plants and thought that it would be simpler to buy them in Australia rather than go through the rigours of the importation route, thus she purchased five *aechmea* 491's.

The particular specimens she purchased were in poor condition having been grown in too much shade and in a large pot of heavy mixture as well as being chemically induced to flower. Consequently the the flowers were poor and "hung over".

Fortunately, Olive recognised the potential these plants possessed and persisted with her plan and bred a large number of plants., the result being that the pups that resulted from her efforts grew into beautiful plants with spineless silver leaves edged with red.

Others became interested in owning these plants and even without flowers people wanted to purchase them, so she sold them with the number "491" in the hope that one day it would aid in the finding out the plant's correct designation.

The plants were spineless *aechmeas*, probably a hybrid of *Fasciata*. As to identifying them from the five potted plants Olive originally purchased, the identification trail was pretty cold. The only clue was an *aechmea fasciata* label in one pot and a small white label with number 491 on it.

Having been to the Deroose tissue culture nursery in Florida Olive knew that they numbered all of their trays of seedlings. She thought that one day this number may solve the problem of its' name.

An interesting riddle and one that remains yet to be solved. Fortunately Olive's insistence on keeping the "491" on the label gives us a clue in the quest for the plants correct name and heritage.

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The Cheerful Agnostic

by Roger K. Taylor

Reprinted, with permission of the Bromeliad Society International, from the Bromeliad Society Bulletin, January-February 1959, v. IX (1), p.13

It has been mentioned that the chemistry student who knows most about the subject is the one who has just finished his first course therein. The basic laws and sweeping generalities have been given, and the ramifications, complications and exceptions revealed in later years have not yet been encountered.

Something of the sort seems to apply to the gaining of some familiarity with the Bromeliaceae. One ultimately comes to know that there are some cryptanthus varieties that are not flat; there are some neoregelias without red tips, and plants with red tips that aren't neoregelias; that fine, lengthwise parallel lines on the leaves do not necessarily signify a guzmania, and some guzmanias are without such markings; that size and colour do not inevitably distinguish between *Aechmea miniata* var. *discolor* and *A. fulgens* var. *discolor* etc.

My thesis is: you do not have to know all about the minutiae to get a great deal of enjoyment from your plants. Certainly it is nice to know as much about them as possible; but they are just as pretty, whether or not you have the precise classification. I have a leopard-spotted *vriesea* and a vividly-marked small plant that seems to be a *guzmania*, both from Panama, and nameless.

Another plant that came marked as "Nidularium fulgens" clearly was not; with its glossy leaves and bronze-red tints it may be a form or hybrid of *Neoregelia carolinae*. To me they are attractive as is, and would not be much more so if I had complete identification. Besides, if you stress classification, you may

have to re-learn names from time to time; what used to be *Nidularium amazonicum* is now officially a *Wittrockia* sp., although according to someone with authoritative knowledge it is most likely to be a variety of *Nidularium innocentii* instead.

So, if the growing of your plants takes precedence over your cataloguing of them, take the matter of nomenclature in your stride; you can have a lot of fun without pretending to be a taxonomist.

A Cultural Hint

(by Richard Oeser M. D.)

Reprinted, with permission of the Bromeliad Society International, from the Bromeliad Society Bulletin, January-February 1959, v. IX (1), p.5.

If you want to get long, strong roots, put the bromels in pure German peat. That material is acid, but contains no fertilizing substances. After the bromels have developed roots they must be fertilized regularly.

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I have noted that old dead wood that has been used for years in the humidity of a greenhouse becomes useless for epiphytic plants. I think that the old wood loses its natural acidity and therefore the plants refuse to make roots. If you take plants that have been growing on an old piece of wood and attach them to a fresh limb, they will almost at once make a lot of new roots.

Hurricanes and Bromeliads

(by Moyna Prince)

Editorial comment (Bob Reilly): Reprinted, with permission of the Florida Council of Bromeliad Societies, from the Florida Council of Bromeliad Societies Newsletter, May 2006, v.26 (2), p.10. While this article focuses on measures to protect bromeliads from hurricane damage, many of the suggestions are also relevant to protecting your plants from severe thunderstorms.

After the storms of the past two years, probably everyone in Florida is resigned to another hurricane coming through, hopefully later rather than sooner.

What can be done to protect bromeliads in the landscape? Obviously your most valuable plants should be brought inside. If you leave your plants in pots when you plant them, it is easy enough to yank the whole thing out of the ground. No plants should be left on benches or in stands when a hurricane threatens, as the pots will become missiles. Hanging plants should also be taken down.

There is never enough time or space to bring in everything. After you have prioritized your collection, and still find too many on the benches, just lay them on the ground, preferably on the most sheltered side of the house. The wind strength is much lower at ground level. Putting them in a corner will

also provide more protection.

There will be many large bromeliads that cannot be moved and they are going to suffer damage. Even though the leaves may be shredded, be patient and wait for the pups to come. As the pups mature, trim the damaged mother plant's leaves to allow the pups to grow unimpeded. If the pups are also damaged, leave their leaves untrimmed as the damage will grow out.

The worst damage will probably come from falling limbs. The faster you can remove the limbs, the less permanent the damage. Cracked leaves are unsightly, but new leaves will grow, and after a few months the damage will not look so bad.

Hurricanes can be devastating, but you can minimize the losses if you have a plan in place before the warning flags are hoisted.

Field Day at "The Olive Branch" Nursery

November 25 - Len & Olive Trevor -
The Olive Branch, 232 Canvey Road,
Upper Kedron, Brisbane

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VISITORS by APPOINTMENT

Pollination of Bromeliads

By Eileen Killingley

Editorial comment (Bob Reilly): Reprinted, with permission of the Illawarra Bromeliad Society, from Newslink, April 2003, pp 14-15. In my article on Guzmania sanguinea var. comosa which was published in the July-August 2006 edition of Bromeliaceae, I mentioned that the purpose of “feather duster-like” like structure sticking up from the plant’s centre was unknown. Eileen Kingley in the article reprinted below makes the point that it is actually an attractant for pollinators. Thanks for the feedback Eileen

While attending the New Zealand Conference and listening to the speakers, I guess I again became aware of how many things about bromeliads that “I didn’t know I didn’t know!” For example, finding it fascinating when I saw a slide of the showy *Guzmania sanguinea* var. *comosa*, with its brilliant red bracts—which are not part of the inflorescence but are used as a flag to attract pollinators to the rather insignificant flower sunk deeper in the rosette (somewhat similar to a Neoregelia)—I looked for further information.

I was aware that plants need pollinators, such as bees, butterflies, etc., but I had not thought too deeply about perfume, colour, etc., just kind of going along with the easy idea that these are for the gardeners’—or nature lovers’—pleasure. But on checking on *Guzmania sanguinea* var. *comosa* in Jose M. Manzanares’ beautiful new book, ***Jewels of the Jungle: Bromeliaceae of Ecuador, Part I Bromelioideae***, I found some beautiful pictures of this plant, and more fascinating information (for me, at least) on “Inflorescences, Flowers and Pollination”.

The book explains that (in Ecuador) bromeliads with red and yellow inflorescences are pollinated by hummingbirds, but those with green inflorescences are pollinated by insects or bats. Some species that flower at night and are pollinated by bats include *Guzmania alborosea* and *Werauhia greenbergii*. *Guzmania sanguinea*, with its flowers submerged in the centre, changes its leaf colour from green to a brilliant red to attract hummingbirds. In *G. sanguinea* var. *comosa* the leaf colour remains green but a largish colourful tuft of bright red bracts (flower-like in themselves) projects on a “stalk” from the centre to attract a pollinator.

In general, the pollination of bromeliads is accomplished by hummingbirds, bees, butterflies and other insects during the day and by bats and moths at night. Other birds and small mammals also pollinate bromeliads. Birds and insects are attracted by and pollinate the majority of flowers containing nectar. In their habitat one can observe, in various species of *Aechmea*, ants collecting the nectar from inside the flowers and thus pollinating them at the same time. In the province of Zamora Chinchipe (Ecuador), flies, smelling the strong odour of garlic given off by its green flowers, are attracted by *Guzmania confusa*. Those species pollinated by insects during the night possess a delicate fragrance, as is the case of several *Racinae*.

The flowers in the majority of the genus *Tillandsia* subgenus *Phytarrhiza*—such as *Tillandsia straminea*—emit a light fragrance to attract butterflies. The heat and humidity of the day accentuate the perfume from the flowers of *Tillandsia platyrhachis*. When the atmosphere is dry in the semi-desert valleys, *Tillandsia caerulea* is fragrant at midday and *Tillandsia dodsonii* (which in itself is interesting as its inflorescence is more orchid-like, reaching up to a metre long) is fragrant at dusk. *Aechmea woronowii*, with white flow-

ers, produces a fragrance from the beginning of anthesis, attracting bats and moths as pollinators. When it rains the strength of the chemical makeup that emits the fragrance diminishes. This is a characteristic common to all fragrant flowers.

In the subfamily Bromelioideae, after pollination, the ovary begins to develop and forms a fruit. The function of the fruit is to protect the seeds during formation and to favour their dispersal. (Fruiting, again, not just for the benefit of us humans!)

These observations serve to emphasise some of the amazing strategies that living things adopt to aid in their survival and propagation.

We will shortly be adding two beautiful new books to our library: Jose Manzanares' book, as above, and Francisco Oliva-Esteve's "*Bromeliads*". As our Library has quite a comprehensive collection of books and Journals I hope that you will use it and enjoy!

Packing Bromeliads by the Bird's Nest Method

(by W.B. CHARLEY)

Editorial comment (Bob Reilly): Reprinted, with permission of the Bromeliad Society International, from The Bromeliad Society Bulletin, July-August 1962, v. XII (4), p.78.

Packing bromeliads properly for shipment can make all the difference as to whether they will be beautiful plants upon arrival, or a blackened mess. In this article, W.B. Charley, an Australian bromeliad pioneer, gives his views on the subject.

A little care and attention to the packing of bromeliads for transport—whether by air, sea or rail—would save many people from disappointment upon receipt of the

package.

Weight and consequent heavy costs for freight must be avoided, and to this end plants must be removed from their pots, the potting mixture taken off, and the roots wrapped in damp moss or some similar material. Many bromeliads can then be arranged in a close bundle by carefully intertwining the leaves until the lot are tightly held together by a rubber band. (*Editorial comment-Bob Reilly: It is important that the leaves stay dry to avoid rot. One way to achieve this outcome is to wrap the roots/moss of each plant in plastic surrounded by a rubber band.*)

The next step is to take a cardboard carton, crumple paper which retains its buoyancy, round the edges of the inside, and make a bird's nest. Now drop into the centre of this nest the bundle of plants and lightly cover the top with pieces of crumpled paper, working it carefully among the leaves and more loosely over the top. And then close the lid.

This will ensure the safe arrival of the plants without the leaves being kinked. Of the many packages that have arrived here, never have we received a plant in perfect order, mainly because the plants have been individually wrapped with the leaves closed.

If the "bird's nest method" is used, the carton can be quite roughly handled, (a common occurrence in transport of this kind), and the plants will remain in perfect condition. Kinked leaves mar a beautiful bromeliad for its lifetime.

Puya: A rugged genus mostly of the high Andes, it has been considered a primitive member of the bromeliad family. Terrestrial or saxicolous, the puya is the most adaptable to cactus gardens. Described by Molina in 1782. The name comes from an Indian term for point.

Saxatilis: Found amongst rocks.

Saxicola: Growing on rocks.

Calendar of Events

Field Days for 2006

28th October, - Bromeliads at BROM-MAD. 9 Purcell Rd, Bells Bridge via Gympie. Lucky gate prize, competitions, sausage sizzle, give away plants for beginners. For enquiries please call Linda Purcel 07 5483 1634

November 25 - Len & Olive Trevor - Olive Branch. 232 Canvey Road, Upper Kedron. Phone 3351 1203 - 9 am to 3 pm. Plant sales 9.30 am. Morning tea and lunch, talks and tours of bush houses. Members please bring a plate.

Bromeliad Show and Plant Sales

11-12 November 2006 - Bromeliad Bonanza. Major show and sale of plants to be held at Mt. Coon-tha Botanic Gardens. Over 500 varieties and hybrids will be on sale. It will also be the first public release of the book "Starting with Bromeliads". This 100 page guide to growing bromeliads in the sub-tropics has over 200 photographs and 200 plant descriptions. Other bromeliad books will be on sale. Opening times: Saturday (11th) - 8 am to 4 pm, Sunday (12th) 9 am to 3 pm. Admission \$3, children under 14 free.

Australia's Open Garden Scheme

11-12th November - Talbot lodge, 4 Prudence Crt, UPPER CABOOLTURE - home of Len and Sheryl Waite - UBD Brisbane 46:R16 - 4.5 km from Morayfield Primary School lights, Caboolture River Road. Entry \$5, Under 18 free. Park-like garden with sweeping lawns against a backdrop of established trees and lush tropical plantings. Colourful kaleidoscope of daylilies, Cannas and bromeliads mass-planted to great Effect. Abundance of statues Waterfall and man-made lake. Cactus and cycads. Light Lunches & Refreshments Plant Sales Suitable for wheelchairs

Special Discounted Rate for the World Bromeliad Conference

from Lyn Hudson

BSI President Joyce Brehm has advised a special rate for current members of societies affiliated with the Bromeliad Society International.

In Australia there are 6 affiliated societies - Queensland, Cairns, Central Coast, Illawarra, New South Wales & the Australia Societies.

For current members of these societies the WBC 2008 registration rate is \$US125.00 and must be paid by 30th December, 2006.

To attend a BSI-WBC you must be a current BSI member, therefore your membership must be added to the registration amount. Add \$US40.00 single or \$US45 for dual membership if you are not already a BSI member.

Completing the Registration Form

1. From Name(s) to E-mail is self explanatory. "Zip or Country Code" = Postcode.
2. Telephone: mine for example – Australia's code from overseas is 61, so my number from USA is: 61 + 74053 3913 (omit the 0 and put the rest) Fax – complete in the same way.
3. BSI Member (circle one) Yes-No. If you are not yet a member, circle 'No'
4. Name on badges - Write the name you want on your name badge for the conference
5. Your BSI Affiliate – write Queensland Bromeliad Society Inc
6. Total Amount Due – must be in US Dollars eg. For one person \$125.00 + \$40

= \$165.00

7. Payment – you cannot send a personal Australian cheque. You can send an International Bank Transfer but it is easier and cheaper to send an International Money Order from Australia Post – charge \$8.65. They will ask how much in US dollars and their computer will convert it to the current exchange rate. Make it payable to "WBC 2008", get a \$1.80 postage stamp while you are at the P.O. The \$8.65 P.O. charge is up to \$1,000 US, so if you and a friend(s) each complete a form, you can share the charge and the postage.
8. Payment by Credit Card – your card provider will charge a transfer fee
9. Sign and send to: WBC 2008 Dan Kinard, BSI Membership Secretary 6901 Kellyn Lane, Vista, CA 92084 USA

The current exchange rate can be accessed on <http://www.xe.com/ucc/convert.cgi> Alternatively the following rates apply.

These are in United States Dollars, plus your BSI membership fee.

\$140.00--30 September 2006 to 30 June 2007
 \$165.00--1 July 2007 to 30 April 2008
 \$200.00-- after 1 May 2008 and at the door

All registrations paid before 30 April 2007 are 100% refundable. All registration fees paid after 1 May 2007 and until 1 May 2008 are 70% refundable. After May 1 2008 no refund will be given (except in cases of illness or death)

Portea: A terrestrial and epiphytic genus of only six species named in 1856 by Koch to honour Dr. Marius Porte, who introduced the plant into cultivation from Brazil.

Nidularium: A small genus endemic to eastern Brazil, where it grows on or near the ground and is characterised by flat rosettes having inner collarettes of bracts which often turn red at blooming.



Bil. 'Stellar Attraction'
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