

Bromeliaceae



Volume XXX Number 2. March/April 1997



BROMELIAD SOCIETY OF QUEENSLAND INC

P.O. Box 565,
FORTITUDE VALLEY,
QLD. 4006
AUSTRALIA

General meetings held on the third Thursday of each month except December at the Uniting Church Hall,
52 Merthyr Road, New Farm, Queensland, commencing at 7.30pm.

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LIFE MEMBERS	:	Mr Len Butt, Mrs Grace Goode, Mr Peter Paroz, Mr Bert Wilson	

Opinions expressed in this publication are those of the individual contributors and may not reflect the opinions of the Editorial Committee of the Society.

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Cover Photograph - Front*Billbergia 'Catherine Wilson'*

Billbergias are named for Gustave Billberg, a Swedish botanist. They are easily distinguished from most other bromeliads in that they have fewer leaves and are tall and tubular. Leaves often show markings of grey-white crossbands, many are beautifully coloured with mottled and spotted markings.

There are several exceptions, but most have a cascading or nodding inflorescence. The bracts are usually rose or red, the flowers are tubular with colour combinations of blue, purple, yellow, green and white.

Our front cover photograph was one of Roly Reilly's seedlings. From seedling to maturity, it has never received any fertilizer and grown at what one might describe as elbow height under 70% shade cloth.

It should be noted, at our March meeting the 'Plant of the Month' begins with the letter 'B'. Greg Aizlewood is well known for his expertise in growing billbergias and will attend the meeting with some of his species and hybrids. Greg will give a plant commentary and some helpful growing hints.

Plant grown by : Greg Aizlewood & Narelle Rowe
 Photographed by : Greg Aizlewood

Cover Photograph - Back*Billbergia amoena* cv. 'Ed McWilliams'

This plant does not conform to the typical billbergia habit of growth. It can be described as a large plant with long strap-like leaves and when grown in good light the leaves turn a bright reddish-brown. Usually billbergias have between four to eight leaves, this plant has as many as twenty to twenty eight.

The plant is vigorous and will produce several off-shoots on short stolons before producing an erect inflorescence. The bracts are brilliant scarlet red, flowers are many and tend to be bunched together, they have green ovaries, blue green sepals and blue tipped petals.

Plant grown by : Doug and Joy Upton
 Photographed by : Doug Upton

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President's Report 1996/97**Bob Paulsen**

Enjoyable meetings, the cooperation and help of many members, beautiful and fascinating plants that never fail to impress, new members, successful shows, a few struggles - these are some of the images that come to mind as I reflect upon the year which has passed.

Monthly Meetings. Some notable ones stand out - The Night of the Earth Stars with Doug Reilly, Stump the Panel was another. The unusual (to say the least) the hilarious approach to show plant preparation by Len Trevor. The Mini Shows, Popular Vote and Plant of the Month continue to be worthwhile activities. It is worth noting, however, only twelve members participated in the Mini Shows. Bob Paulsen progresses to the Advanced section and Perry Crawford to the Intermediate. The same number of members brought plants to display in the Popular Vote. The winners, Olive Trevor, Barry Glen and Perry Crawford. Let us make a special effort in 1997 to at least double the number of participants in these features of our meetings.

Shows and Displays. The R.N.A. & I. Association and members of the public are always very appreciative of the effort made in displaying Bromeliads in the Horticultural Pavilion at the Ekka. This display is one of the important projects of our society, and is fully consistent with one of the main aims to promote the plants among thousands of people who would not otherwise see them. The Bromeliad Society of Queensland has again committed itself to stage the display in August 1997. The Combined Show in June, at Mt. Coot-tha, was successful in attracting many members of the public and the sale of many plants, but especially proved to be an enjoyable, friendly, cooperative effort. The response to the display at the Royal Horticultural Society's Garden Spectacular last October was 'beautiful plants, one of the best yet'. Many thanks to Bob Cross, Show Organiser, plant contributors and all the regular helpers.

Bromeliaceae our Journal. The high standard of our Journal has attracted attention and appreciation locally and overseas. Don Hobbs had to relinquish the editorship during this year and Doug Upton has continued the good work. We thank them both. The Editor is always looking for articles, stories of your experiences with plants, questions and information you have gained in the culture of your Bromeliads. Write him a letter now and then. The Society is doing its best to give something back to its members through the Journal, the cost of which is heavily subsidised but carefully monitored. It is important not only to maintain membership members but also to increase them in order to justify the efforts and cost of production.

Management Committee. I express my appreciation to the Management Committee which meets monthly to deal with business and planning etc.,. A good spirit of co-operation and support has prevailed throughout the year. A special word of thanks to my Vice-President who has helped me out on occasions when I have needed 'a man in the Capital'. To my Minute Secretary Jan Duncan who has made my job so much easier, thank you. We are looking forward to having a few new members on the committee this year, they will gain experience and contribute with help and new ideas.

The Study Group. You will have gathered from the regular reports in Bromeliaceae that there is an active enthusiastic group meeting monthly on Saturdays to enjoy hands on experience with seed raising, plant identification and study. I encourage those who are engaged in these pursuits. Others are welcome to share in the opportunity to gain a more intimate knowledge of Bromeliads.

Library. Mavis Paulsen continues to do a great job in purchasing books, filing the many magazines we receive from Societies in Australia and overseas, recording books on loan and the setting out of books for lending and sale. It is encouraging to notice that the library is well used and that most people return books on time.

Finances. The finances of the Society continue in a healthy state. We rely on subscriptions, plant raffles and plant commissions.

Concluding Remarks. At the outset of 1996 I accepted the two hats of President and Secretary which was a new situation for the Society. The arrangement has worked out quite well and I have managed to keep in touch with the business of our organisation and to attend to matters as they arise. We have been able to overcome organisational difficulties which have arisen because of my distance from Brisbane. However, there is more to running a group than attending to day to day business and I feel that it is far better to have a President and Secretary in the Brisbane area for the ongoing progress of the Society.

My sincere thanks are offered to all our members both in the country and metropolitan areas. Thank you for the notes of appreciation in your letters. Many make an honest effort in helping your Society and I encourage you to maintain your membership and interest. I appeal to metropolitan members to attend the monthly meetings. Special thanks to those who come regularly from outside the city area.

May the coming year bring you much pleasure and satisfaction from growing Bromeliads.

My Name is Harry

In the last issue of Bromeliaceae, the Editor introduced me to you. He asked if it was acceptable to offer me a page (space) in the Journal. I cannot believe my luck, not one member wrote in to say, 'No we don't want him'.

The Editor called me a bit of a smart Alec, I don't agree. He also said I can be controversial and straight to the point, I agree with him there. So here I am, what do we talk about first? There are a few things that bug me, so let's start with this one.

Members of Bromeliad Societies everywhere should be aware that the naming of plants is somewhat controlled by a code of rules which are generally accepted internationally. This code of rules also covers the requirements for effective publication of a new name and the correct spelling.

The name of a plant consists of two parts, the name of the genus and the specific epithet. By convention, and at most times, botanical names are given a Latin form, although many of the words are not Latin in origin and this applies particularly to plants which are named for people. When this happens the epithets are given the endings *ii* or *iana* for male, and *iae* or *iana* if female. For example - *Tillandsia duratii* after the Italian gardener Durat, and *Aechmea seideliana* after the family of gardeners, Seidel in Brazil.

If a person's name ends in a vowel, or *er*, then the first *i* of the suffix is omitted. For example - *Tillandsia deppeana*, named after the botanist F. Deppe, and *Aechmea fendleri*, after the plant discoverer, August Fendler.

It is agreed the above names follow the code of rules but what of the following, have these plant names been spelt correctly?

Vriesea kupperiana - after W. Kupper, discoverer of plants.

Tillandsia seleriana - after C. Seler, discoverer of plants.

Guzmania scherzeriana - after the collector G. H. Scherzer.

Aechmea fosteriana - after Mulford B. Foster, American Bromeliad researcher.

Tillandsia edithae - after Edith, wife of Alfred Blass.

Neoregelia carolinae - after Carloline, wife of Edouard Morrow, botanist.

Aechmea racinae - after Racine, wife of Mulford B. Foster.

The first four male names end in *er*, therefore the *i* of the suffix should have been omitted. For example *fosterana* not *fosteriana*. The ladies names, *edithiae* not *edithae*. Both Caroline and Racine end with a vowel, they should read, *carolineae* not *carolinae* and *racinae* not *racinae*. What do you think?

Bromeliads and Mosquitos**R. Smythe MSc.**

When I seriously commenced collecting bromeliads about three years ago I started to hear about bromeliads and mosquitos. I live right next to the commons, which is a tidal mud flat, and when mosquitos breed they all gather at my oasis in the desert before moving out to invade the town. I remember swarms moving off the ground as I walked. I knew these mosquitos were not coming from my few bromeliads. All the year round, visitors complained about mosquitos in my garden. Things have changed, as my bromeliad collection has increased, my mosquito problem has decreased. Other than the swarming period of the year, the garden is a great place to be.

I have been off work for three months due to ill health. This has left me with plenty of time to study my bromeliads for mosquito breeding. I have 700 vases (funnels) to inspect, most evenings I can be found with a torch peering down inside the plants. The larger vase type are studied during the day using a battery acid tester. The tester is great for drawing water and anything else that might be in the vase. If mosquito larvae are found, the contents are tipped into a white container for further inspection, then placed in another container to be hatched and identified.

The Townsville City Council advertised bromeliads as the main source of breeding the mosquito '*Aedes aegypti*'. *Aedes aegypti* is the dengue fever mosquito. This stirred me to action, I immediately wrote to the head of the World Health Organisation, (W.H.O.) dengue programme in Geneva. Dr Knudsen informed me that bromeliads were of no concern as this mosquito had only been found twice in the world in bromeliads. These recordings were from somewhere in the Caribbean.

I started looking for '*Aedes aegypti*' in bromeliads, and now, nearly two years on, I have not found one of this mosquito in my bromeliads. When mosquitos have been found, they have almost always been "*Aedes notoscriptus*". This fellow has the football socks (banded) legs like that of "*Aedes aegypti*", but has different markings on its back. Probably confusion between the two species has caused the bad publicity. I have passed my knowledge to the Health Officials in our Council. The Council (Health Department) is saying bromeliads are bad in the tropics, while I say, we in the dry tropics, like Hawaii, have the best growing and colouring up conditions in the world. Bromeliads should be promoted as a tourist attraction here in the tropics. The Townsville Parks and Gardens section of the Council supported my research, and I thank them. They are helping me resolve this dichotomy of opinions by supplying me with some of their

neoregelia bromeliads to add to my study, so that I have a larger range of genera and species than I had in my pilot study.

While I have been waiting for new growth (pest free plants) and waiting for the vases to become large enough to possibly attract mosquitos, I made a strange observation. The Council supplied plants were attracting mosquitos in some of their plants, while mine were not. How can this be? My garden has been pesticide free for many years while the Council's plants would have been sprayed. I ask the question, could the Council have killed a predator with their spraying?

My son Dr Mark Smythe, working at the University of Queensland, read and forwarded to me an article found in their Newsletter. It stated a predator of mosquitoes called 'Mesocyclops' had been found by a Dr Michael Brown working at the Queensland Institute of Medical Research. I had proposed some time ago that I believed there could be a chemical inhibitor to mosquitoes released by bromeliads. My wild unspoiled bromeliads, up in the trees, never had a mosquito problem, so my hypothesis sounded reasonable, but why were the Council's bromeliads different? I needed a sample of the predator 'mesocyclops' for identification. While waiting for a sample, I went to my bromeliad collection and tipped their contents into a white container and subsequently filled several vessels with this water that contained organisms. Thanks to the Council supplied *Neoregelia carcharidon* I had a supply of aedes notoscriptus wrigglers (not the dengue mosquito).

I tried to separate the different types of organisms captured in the vessels then fed wrigglers to them. Two organisms regularly caused the larvae to disappear. I then removed the organisms from the waters and again placed wrigglers in the water alone, wrigglers continued developing. My hypothesis on a chemical inhibitor released by bromeliads was incorrect, in these cases. I am a chemist and a botanist, not a zoologist, so I cannot as yet give the scientific names for both organisms that gave some biological control of the larvae. In describing these two organisms, one is a filamentous green stuff found in stagnant ponds. The other, a two to three centimetre filamentous aquatic worm, when it is touched by a wriggler it virtually convulses into a knot.

I followed up my tests when visiting a grower who kept plants in a wilder state than mine. All plants with the filamentous green stuff, and colonies of worms, were free of mosquito larvae. I am setting up vessels of the other organisms in my yard to see if the organisms attack the mosquito eggs. Some of these organisms which may include the mesocyclops have been observed visiting the surface especially at night. They just might feed on the mosquito eggs.

Although I have said my hypothesis on an inhibitor released by bromeliads was incorrect in those cases, I do believe some of the common species up here in Townsville, actually stop mosquito eggs from hatching, be it inhibitor or digestive process. Rarely a wriggler is found, yet nothing that might eat them can be seen in the water. Bromeliads can be carnivorous and digest things that have fallen into their cups.

The reader may ask, do bromeliads breed mosquitos and do they increase the mosquito population? Yes bromeliads can breed mosquitos and no, they will not increase the mosquito population if they are handled properly. In Rio de Janeiro in the 50's, the municipal bodies stripped all the forest of bromeliads in order to remove the water that mosquitos breed in. They only created a plague, as most of the eggs of the mosquitos would have been destroyed by predators in the natural state. The mosquitos found other sites where there were no predators, with the problem only becoming exacerbated. I believe if you wash bromeliads out on a regular basis, you must then maintain this process, otherwise, you are creating the environment mosquitos will jump at, and this is fresh clean water, free of predators and any possible inhibitor.

The best advice I can give at this early stage for growers like myself who prefer predators to chemicals, is to keep bromeliad cups full of water. Do not let them dry out, this will cause the organisms to die. With any overhead watering do not over water and wash out the cups, when this happens your bromeliads become vessels for an enterprising mosquito to investigate.

My research continues, I am anxious to share my findings and will confirm these findings later, after more extensive testing. Before I was retired on disability, I devoted so much time to the mosquito project, my hypothesis, experiments and observations will continue to prove or disprove my statements.

My aversion to insecticide in the environment will always encourage me to continue plugging my predator approach in cultivating bromeliads.

This compilation of two articles (one of which appeared in Bromeletter, Sept-Oct, 1994) by R. Smythe MSc. 69 Bundock Street, Belgian Gardens, Townsville, will be followed in the next issue of Bromeliaceae by several questions and answers engendered by his research. Ed.

Growth Requirements

'Do I need to use fertilizer on my bromeliads? If so, what should I use, how much and how often?' These questions are asked by most of us when we first begin to cultivate bromeliads, and are still being asked today. We have searched for guidance in books, meetings and lectures, and when a fellow member displays a beautifully grown specimen we ask, 'what fertilizer do you use?'

Letter sent to Bromeliaceae (All and Sundry) abound with requests for information on fertilizer. Rather than answer your questions individually, hopefully this article will suffice.

Those responsible for experimentation and research always seem to come up with a degree of mixed understandings. However their research has been responsible for invaluable information about deficiency symptoms in plant growth when single nutrient components are undersupplied. We are aware of the danger of too much nitrogen, but, if nitrogen is undersupplied plants can be deformed, leaves tend to be narrow and colouring is poor. Leaf tips can become dry and dead.

The fundamental mechanisms of nutrient uptake and requirements of bromeliads has been documented in numerous books on bromeliad culture. One of the earliest recorded experiments, a seed raising exercise using fertilizer in the growing medium and foliar feeding, was conducted by a group of bio-chemists in Germany. Seeds were sown on pre-fertilized planting mix and un-fertilized mix in what was described as a 'number of seedling trays'. Germination time was equal, with no noticeable difference from one tray to another, however, after two months, seedlings in the pre-fertilized mix showed better growth. After another two months, one tray of the pre-fertilized and one of the un-fertilized seedlings were taken to an isolated corner of the 'shed' where controlled foliar feeding was commenced. Weak fertilizer sprays were used once every two weeks. After some time (there is no reference to days or months) these two trays of seedlings began to wilt. Leaves were now a pale green, they had lost their upright growth, there were signs of plant rot. Both trays were dumped.

On the other side of the 'shed' seedlings in the pre-fertilized mix were much larger than those in the un-fertilized mix. Another two trays, one of each mix, were taken to the foliar feeding area, again the foliar spray programme was commenced. After two months both of these trays held strong healthy plants. Those in the pre-fertilized mix maintained their advantage of stronger growth, but other than that, both trays produced improved recognisable growth.

It was obvious foliar feeding was harmful to seedlings in their early stage of

growth. However once leaf growth was more advanced, foliar feeding produced stronger vigorous plants. Also, pre-fertilized mix proved advantageous over the un-fertilized mix, and, absolute optimum results were only achieved when root and foliar fertilization was used in combination. Observations were that nitrogen compounds are more readily assimilated by the leaves while roots exert a greater function in phosphorus and potassium uptake.

There is no mention of the type of fertilizer used in the planting mix, the nutrient salts used in foliar feeding were listed as follows : 2.0g ferric sulphate, 1.0g ferric ammonium citrate, 20.0g magnesium sulphate, 16.57g ammonium sulphate, 75.38g calcium nitrate, 39.62g mono-potassium, 45.62g potassium nitrate dissolved in 10 litres of water. This resulting 2% stock solution was then further diluted to a concentration series from 0.025 to 0.25% and applied on seedlings every two weeks.

Over the years foliar feeding has returned excellent results. It has been suggested diluted fertilizer sprays when applied at frequent intervals, are parallel if not similar to the nutrient concentrations trapped by bromeliads in habitat. Experimentation has produced many different formula fertilizer, it is advisable to use a preparation that has a low nitrogen content. Those who recommend fertilizer, organic or inorganic, always advise caution and usually apply during the active growth period.

Readers (members) claim information on fertilization can be confusing. Questions asked - why is it some growers insist it is not necessary to fertilize bromeliads? Also, experimentation has shown that the natural slow growth rhythm of the Bromeliaceae responds to 'speeding up' only marginally. Plus, the influence of specific nutrient components on flower formation, and size of inflorescence is still obscure. Your letters ask for procedures using commercial fertilizers, the brand names you have listed can be used with safety, please read the instructions on the container.

It would be remiss of me not to mention the article 'The Fertilizer Revolution', written by Herb Plever and published in the B.S.I. Journal, Nov-Dec. 1996 Edition. I would like to suggest members read the article. (If you do not subscribe to the B.S.I. Journal, you will find it in our society library). Not only will it answer most of your questions on fertilizer, it may make some of us rethink the statement - the natural slow growth rhythms of the Bromeliaceae responds to 'speeding up' only marginally.

Ed.

NEWSLETTER

 Forthcoming Events
  Member's Forum
  Show Reports
 Society News

Forthcoming Events

Monthly Meetings:

20th March 1997.

- Popular Vote Members Choice
 - Plant of the Month 'B'
Billbergia, Brocchinia, Bromelia
 - Plant Commentary: Greg Aizlewood
 - 'Stump The Panel'
(Questions & Answers)
-

17th April 1997.

- Mini Show

Class 1. Neorgelia species and hybrids
(medium to large rosette over
200mm diameter at maturity).

Class 2. Guzmania species and hybrids.

Class 3. Dyckia species and hybrids.

- Plant commentary on Mini Show by Judges.
- Members Show Table.
- No plant of the Month because of Mini Show
- Guest speaker from Horticultural Solutions.

'Calcium Nitrate - The Versatile Nitrogen'

Combined Show Meetings

Meetings held at the residence of John & Marie D'Alton 39 Agnes Street, Torwood.
Phone : (07) 3371 3707

Meetings commence at 7.30pm on the following dates;

25th March
22nd April
27th May

Competition Winners - 1996.

Congratulations are extended to the following members for their success in the Popular Vote and Mini Shows during 1996. Trophies were presented to the winners by our Life Member Bert Wilson at the February Meeting.

Popular Vote

Advanced : Len & Olive Trevor.
Intermediate : Barry Genn.
Novice : Perry Crawford.

Mini Shows

Advanced :
First : Len & Olive Trevor.
Second : Des Anderson
Intermediate
First : Bob Paulsen
Second : Jeanette Henwood
Novice
First : Perry Crawford
Second : Ivan & Dawn Hole.

Show Reports

Mini Show - 16th January.

Advanced

Class 1. Billbergia species and hybrids.
1st. *B. Don Beadle hybrid* - L & O Trevor.
2nd. *B. Perrimans Pride* - D & J Upton.
Class 2. Vriesea species only
1st. *V. ospinae v. gerberi* - L & O Trevor.
2nd. *V. vagans* - Bob Paulsen.
Class 3. Pitcairnia species and hybrids.
No entries.

Intermediate**Class 1.**

- 1st. *B. Catherine Wilson* - E & N Weir.
2nd. *B. Catherine Wilson* - P. Crawford.

Class 2.

- 1st. *V. fosteriana* - Perry Crawford.
2nd.

Class 3.

No entries.

Novice**Class 1.**

- 1st. *B. leptopoda* - Bob Cross.
2nd.

Class 2.

- 1st. *V. hieroglyphica* - Bob Cross.
2nd. *V. fosteriana* - Bob Cross.

Class 3.

No entries.

Popular Vote - 20th February.**Advanced****Class 1.**

- 1st. *T. multicaulis* - D & J Upton.
2nd. (tied)
T. tenuifolia x stricta - N Ryan.
T. Creation - L & O Trevor.

Intermediate**Class 1.**

- 1st. *T. xerographica* - Patricia O'Dea.
2nd. *Ae. Fascini* - Peter Crawford.

Novice**Class 1.**

- 1st. *T. fasciculata magnifica* - Bob Cross.
2nd. *Catopsis compacta* - P Kesby.

Study Group

Venue: 232 Canvey Road, Ferney Grove.
Ph: (07) 3351 1203

There will be no meeting in march, next meeting 7.00am 26th April.

Study Group Report

On Saturday 25th January the Study Group held its first meeting for the year at the home of Len & Olive Trevor. Len & Olive have once again made their home and facilities available to the group, for which we are most grateful. Even with family commitments often preoccupying the Trevor's time and efforts, the study Group is always accommodated and welcomed.

As is usual for our first meeting of the year, we formulated a program, with a firm resolve not to be sidetracked. Seed raising continues to be of importance. One member suggested that we only use the best plants to cross, but it was pointed out that the best plants may not produce ideal crosses or even any at all. Having suitable plants in flower at the same time is also another factor, with mother nature being the dominant force.

Olive & Len have also allocated benches in their vriesea, aechmea and neoregelia houses, which will be used for the plants on which crosses have been made, so as they can be checked regularly by the group and not become lost and forgotten amongst the other plants in their collection.

Bringing plants along for identification, discussion and/or comparison will be part of the meeting, with one member allocated each month and other members to join in with their own plants if they wish. It will be a good opportunity to compare the growth of seedlings which have been shared throughout the group in the past.

Unfortunately, with all this new resolve fresh in our minds and enthusiasm for the year ahead, the morning was showery, which curtailed our outdoor and shadehouse activities for this month.

The Study Group is also looking forward to joining with other members on social outings during the coming year, visiting Bromel growers, other garden venues, and just enjoying each others company.

All society members are invited to join us each month for a social breakfast and a morning hands-on learning about our beautiful Bromeliads.

Liz Weir.

Letters to the Editor

While reading through the Bromeliaceae vol. XXX, No. 1, I felt I must make comment. First of all, the improved excellence of this Journal, as in the addition of colour the interest gets better every time. Keep up the good work.

Of real interest to me was the very comprehensive and detailed report on that insidious member of the Diaspididae 'fly speck scale'. I noted Ben Louden's report covered the subject very well and leaves little to be said, but I feel it does need just a few comments from me.

Early Bromelians have read what I have had to say on the subject, and it is still a recurring problem for me. Powerful insecticides as used by commercial bromeliad growers will definitely keep it at bay. I have never found it in plants from any well established Queensland nursery. However, sprays such as Supracide are so powerful they must be used with adequate spray precautions.

Scale just appeared among my billbergias and aechmeas about the 1975 period after I had purchased a few variegated ananas off-sets, the yellow margined type from a pineapple farm on the north coast. It was not the grey pineapple scale, or the large *Diaspis bromeliae*, but most definitely *Gymnaspis aechmeae*. It was identified by one of the Forestry entomologists when I worked for that body. The habits of this scale are well reported in your article.

Unless you are absolutely sure you have eradicated the pest from your collection be ever vigilant, and check every purchase from any dubious source. It is my contention that the pest will exist even in dormancy in a garden that has had a bad infestation just waiting for a suitable host. As reported previously, I personally have not found it on any other plant families, though it will infect the broader leaf green tillandsias, and in my experience, not the silver trichomed tillandsias.

Treatments I am now using (effectively) are, one drop only of a wetting agent to one litre of rain water plus two drops of Rogor liquid, then five mls of Natrasoap to the litre of rain water plus two drops of Mavrik spray. For those not conversant with Natrasoap, it is made in Nerang, Queensland. It contains potassium oleate, potassium linolate, potassium palmtate and potassium spearate. Environmentally made for scale. Len P. Butt.

Another letter on fly speck scale, this one from Perry Crawford. Thanks to both members for their added information. Ed.

Regarding Bromeliaceae, Jan/Feb. 1997, article on '*Gymnaspis aechmeae*', (fly speck scale). I have a couple of ideas which may be of benefit to bromeliad growers, in treatment of this problem.

1. Decide if you really want to purchase that infected plant, or, if it is already in your collection and whether it is worth saving.
2. Have a quarantine area well removed and shielded from bromeliad areas for any suspect plants.
3. All bromeliads in the quarantine area are treated every 4 weeks with 'Disyston 50' granules and every 8 weeks with 'Malathion' spray.
4. Treat suspect plants until healthy pups are able to be removed. The pups are removed to an intermediate area and continued to be treated as before. The parent plant is destroyed.

I have had good success with this method, but unless you really have to have that plant, I believe it is better to purchase/acquire healthy plants. All my plants are treated every 12 weeks with 'Disyston 50', a minimum dose as a preventative measure and sprayed with 'Malathion' every 6 weeks. To further help prevent disease developing when removing pups from the parent plant, all cuts are treated with 'Mancozeb' powder.

If and when 'Disyston 50' is removed from the market, I shall seek a similar systemic poison and trial it on a selected group of bromeliads, to determine any side effects. Perry Crawford.

Western Bromanza

Bromeliads IX Australia, International Conference - Perth

Just a few notes on this year's Bromeliad Conference. Conference dates, 26-29 September 1997. Registration closing date is the 1st of September, the fees are \$130.00 single and \$260.00 double. There is a \$20.00 discount per person if fees are paid before the 30th April.

The daily temperature around Conference time fluctuates from 16° to 26°C with the night time temperature between 7° to 14°C. Days can be cloudy or sunny and a light shower or two may eventuate, a light raincoat would be an asset on these days. A stiff breeze has been known to be around at this time and could be a bit brisk in the evenings. A wind proof jacket, warm clothing and comfy footwear for the bus tours and the post wildflower tour will be needed.

What is on around Perth? The Royal Agricultural Show at the Claremont Show Grounds starts on the 7th September, and is on for two weeks. Various boat trips on the Swan River are available.

Registration Brochures are available, please contact the Registrar Mr Vic Przetocki, 36 Elm Street, Hamersley 6022 WA, or phone (09) 342 6102

All and Sundry

Q/. I have been growing bromeliads for some twelve years, and only last year I joined the Bromeliad Society. I have cross-pollinated several plants when there were suitable flowers and pollen. I have produced seeds, planted them out and have grown seedlings to mature plants. I have (after all this time) five bromeliad plants I consider to be super special. I would like to have my plants named and recognised. What are the procedures? I would appreciate your assistance.

A/. In your letter you have signed yourself with initials only, you have not given your surname or a mailing address. While it is not essential for you to supply these details to ensure and answer in 'All and Sundry', it is necessary if you are to be sent appropriate information and forms. You mentioned you joined the Bromeliad Society last year, you did not tell us which Bromeliad Society.

Having said all of that, I wish you the best of luck with your 'specials'. There are papers available on general instructions for registration of bromeliad cultivars, also an application form. These are available to you from our Secretary. I will quote a section from the general instructions, it will give you some idea of requirements.

The most important decision you must make before attempting to register a cultivar is to satisfy yourself that the cultivar is truly unique, and recognisable. Recognisable would mean that the cultivar has unique characteristics which allow it to be identified or recognised without a tag.

The decision is yours to make and your best judgement is required to prevent the registration of large numbers of essentially identical plants. For instance, if you make a hybrid grex resulting in a variety of clones or cultivars, try to register only the truly unique clone or clones. The first clone named will also name the grex. Try to destroy the balance of the grex, or at least try not to release it. One of the main purposes of cultivar registration is to eventually ensure that all plants carrying the same name are identical. This can only happen with the cooperation of every collector/hybridizer.

There are several guidelines you should follow in naming your plants plus descriptions you should cover in your application for registration.

Q/. Some of my bromeliads have been in the same pot for years, I like to grow my bromeliads clustered. My plants look healthy, is it necessary to repot? I keep the plants clean and remove dead lower leaves.

A/. When a plant outgrows its container it should be potted into a larger container. However with bromeliads, it can be attractive to grow them clustered in a smallish pot. There are a few precautions you should follow. The first action is to tap the plant gently out of the pot and to inspect the roots and potting mixture. The ideal situation is where the potting mix has no breakdown and is well aerated, with all the mixture held by a network of fine roots with white tips. These are the indications that all is well and the plant can be returned to the pot, or potted on if you so desire.

If these conditions are not found, then a closer inspection is required. If the roots have not filled the pot, then check the quality of the potting mixture, and also your watering programme. If the roots have no white tips, there is no active growth. In this case, the grower should look for insect pests, broken down potting mixture or unsuitable watering schedules. If the potting mix has broken down causing waterlogging and loss of aeration, then check the composition of the mixture and the time in use.

In any of the latter instances, repotting of the plant is required. This involves washing the old mixture away from the roots, trimming away any dead roots, and working fresh mixture between the healthy roots. Some shock to the plant will result, but in the long run the plant will benefit.

Where potting is appropriate, it is best to put the plant with the root-ball undisturbed into a larger pot and fill in the extra space with fresh mix. In this way there is the least disturbance, and growth usually proceeds uninterrupted. With a good cluster of bromeliads, a slightly larger container will hardly be noticed and your bromeliads can only benefit.

Q/. Why is it when I visit another person's collection of bromeliads I come away frustrated? I am not complaining about quantity, my frustrations come about when I see plants in flower while mine show no signs of an inflorescence. A typical case, my plants came from the same grower, at the same time, my friend and I bought pups from the same plant. What am I doing wrong?

A/. While your plants are the same age as those of the 'other person', your plants are not as mature. An inflorescence is solely a function of the state of maturity of the plant. Your growing conditions should be assessed. Free air movement around plants, the use of fertilizers, potting mixture, watering programmes etc., All of these are contributing factors in maintaining healthy *progressive* plant growth. I suggest you consider one or all of the above, talk to the 'other person', I am sure he/she will assist you.

Q/. A garden club member and I were discussing various plants when the subject of pests and diseases was mentioned. He asked me, as a bromeliad grower did I have a problem with a cricket-like insect (not the grass-hopper) that loves to eat bromeliads. He could not remember the name of the pest, it's name sounded like 'vetta' or 'weta'. He heard it was a problem in New Zealand. Can you tell us something about it?

A/. I am sorry, no, I have never heard of it and cannot find any reference to this pest in my library collection. Perhaps we have a member/reader who could enlighten us.

Q/. I grow *Tillandsia duratii* and *T.duratii var.saxatalis*. Both are young plants but, they have not grown very much this year. I have been told to grow them dry. Is this correct, how do I tell them apart and is it true variety saxatalis is difficult to flower?

A/. Not all tillandsias like dry conditions. The species must be considered on its own merits until enough information is available for generalizations. Both plants are similar in appearance, variety saxatalis is a slightly smaller plant. I have not found it difficult to flower. It is however, not for the impatient. It has taken eleven weeks from the time I first noticed a change of growth in my plant, until the first flowers appeared. The flowers are circular in outline, about 12mm in size and strongly perfumed. When they first open, the petal colour of my clone is a dark blue, fading a little as the flower ages.

This is an undemanding plant to grow, but untidy in its manner of growth and not very prolific in its production of off-sets. While admiring the flowers, I was surprised to find a bumble bee hovering nearby and then to methodically visit the recently opened flowers. I have been quite unsuccessful in pollinating this plant at previous flowerings and am watching anxiously to see if the bumble bee was more successful.

Q/. To clear up a friendly argument, can you please advise my close friend, a fellow society member, which one of us is correct? He insists the first general meeting of the Bromeliad Society of Australia was held in 1963. I say it was 1962.

A/. I am pleased it is a friendly argument. I hope it remains that way when you read my answer.

The first meeting of interested growers was held at the home of Mr. and Mrs. G.A.Duncan, early in 1962, and this resulted in the *forming* of the Australian Society. The first *general meeting* was held at the Y.M.C.A. Pitt Street, Sydney on the 6th July, 1963.

BROMELIAD SOCIETY OF QUEENSLAND INC

Income & Expenditure Statement For the year ended 31 December, 1996

	1996 \$	1995 \$
Income		
Trading profit	576.16	(783.76)
Subscriptions	1,582.00	1,284.00
Plant sales commission	2,451.60	3,100.80
Raffles receipts	1,154.70	487.40
Advertising	130.00	255.00
RNA show	0.00	900.00
Donation	10.00	0.00
Interest - bank	74.14	1,044.04
Interest - Term deposits	2,190.78	0.00
Trade table	0.00	1,041.33
	8,169.38	7,328.81
Total Income		
Expenses		
Bank fees and charges	26.60	50.25
Conference tapes	0.00	70.00
Depreciation	306.98	383.73
Door prizes	5.00	14.50
Donations	745.18	0.00
Guest speaker	0.00	200.00
Hire - Hall	470.00	680.00
Incorporation expenses	20.50	51.00
Insurance	475.25	226.00
Postage	528.59	978.61
Printing & stationery	3,628.49	3,174.39
Show expenses	171.85	178.60
Social Costs	153.40	237.60
Subscriptions	543.01	100.53
Telephone	97.12	0.00
Travel reimbursements	30.00	0.00
Trophies	79.00	444.85
Raffle expenses	711.00	0.00
	6,991.97	6,790.06
Total expenses		
<i>Operation Surplus</i>	177.41	538.75
Accumulated Surplus at the beginning of the financial year	36,136.56	35,597.81
	36,313.97	36,136.56
Accumulated Surplus at the end of the financial year		

BROMELIAD SOCIETY OF QUEENSLAND INC**Balance Sheet
As at 31 December, 1996**

	1996 \$	1995 \$
Current Assets		
Cash		
Cash at bank	2,955.24	2,452.83
Cash floats	100.00	100.00
Term deposit - Westpac	5,450.00	4,898.01
Term Dep NAB 64 706 6254	0.00	17,000.00
Term Dep NAB 67 955 8295	13,262.76	0.00
Term Dep NAB 67 387 7675	5,000.00	0.00
Other		
Stock on hand - books	2,143.00	4,604.57
Stock on hand - stickers	28.50	28.50
Stock on hand - greeting cards	430.40	632.50
Stock on hand - badges	1,502.85	1,502.85
Total current assets	<u>30,872.75</u>	<u>31,219.26</u>
Non-Current Assets		
Property Plant and Equipment	1,227.93	1,534.91
Plant & equipment	2,667.81	2,551.91
Library		
Other		
Equity combined show	1,545.48	1,545.48
Total non-current assets	<u>5,441.22</u>	<u>5,632.30</u>
Total Assets	<u>36,313.97</u>	<u>36,851.56</u>
Current Liabilities		
Creditors and Borrowings		
Other		
Book deposits held	0.00	570.00
Subs in advance	0.00	145.00
Total current liabilities	<u>0.00</u>	<u>715.00</u>
Total liabilities	<u>0.00</u>	<u>715.00</u>
Net Assets	<u>36,313.97</u>	<u>36,136.56</u>
Members' Funds		
Accumulated surplus (deficit)	<u>36,313.97</u>	<u>36,136.56</u>
Total Members' Funds	<u>36,313.97</u>	<u>36,136.56</u>

Please send all contributions for publication in Bromeliaceae to:
 The Editorial Committee
 C/- Doug Upton
 101 Jerrang Street
 Indooroopilly, Brisbane 4068

Publication Deadlines for 'Bromeliaceae'

All articles, competition results, programme details and other items of interest for publication must be in the hands of the Editorial Committee by the following dates:

May - June, 1997 Edition	17 April, 1997
July - August, 1997 Edition	15 June, 1997
September - October, 1997 Edition	21 August, 1997

Advertising in 'Bromeliaceae'

Available to members and interested persons at the following rates:

Annual Rate: \$30.00 (for six issues of 'Bromeliaceae')
 Casual Rate: \$15.00 (for two issues of 'Bromeliaceae')

Size of advertisements is restricted to one third of a page of 'Bromeliaceae'.

Applications for advertising should be in writing, should include all required copy for advertisement, and should include payment in advance by cash or cheque.

The first advertisement will appear in the next available issue of 'Bromeliaceae' after payment is received.

Copy may be updated at any time if supplied in writing, otherwise last available copy will be used.

It is regretted that no photographs can be included in advertisements at this time.

The Society reserves the right to refuse publication of any advertisement.

* BRISBANE BROMELIAD CENTRE *

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Bromeliad Society of Queensland Inc.

Greeting Cards For Sale

Ideal for corresponding with friends and fellow bromeliad enthusiasts

Featuring colour photographs of *Guzmania danielli*, *G. Orangeade*, *Vriesea Asahi*, *Vriesea Hybrids* (group), *Tillandsia bulbosa*, *T. duratii*, *Aechmea cucullata*, *A. servitensis* v. *exigua*, *Portea fosteriana*, *Neoregelia Hybrids* (group).

Society Badges are now available
Greeting Cards at \$1.50 each
Society badges at \$5.00 each

Contact our Secretary.

Books for Sale

	Member	Non Member
'Colourful Bromeliads' by Victoria Padilla	\$15.00	\$16.50
'The Beauty of Bromeliads' by Tony Lea	\$4.50	\$5.00
'Bromeliads' by Bill Seaborn	\$4.50	\$5.00
'Bromeliads for Everyone' by Bea Hansen	\$2.50	\$3.00
'Bromeliads for Everyone 2' by Bea Hansen	\$11.50	\$13.00
'Bromeliads in Australia' by Brom Society of NSW	\$2.00	\$3.00
'Growing Bromeliads' by Brom Society Australia	\$11.00	\$12.50
'Genus Tillandsia' by Paul Isley III	\$3.00	\$3.50
'International Checklist of Bromeliad Hybrids' by B.S.I.	\$3.50	\$4.00
'A Bromeliad Glossary' by B.S.I.	\$3.50	\$4.00
'Bromeliads - A Cultural Manual' by B.S.I.	\$4.00	\$4.50
'Brom. VII Conference Proceedings' by BSQ Inc. (1993)	\$20.00	\$22.00
'Brom. III Conference Proceedings' by BSQ Inc (1985)	\$10.00	\$11.00
'Hybridists Handbook & Checklist of Bromeliad Hybrids' by Derek Butcher (3rd Edition)	\$6.00	\$7.00
'Distributional Checklist - of the Genus Tillandsia' by Lloyd Kiff	\$23.00	\$25.50
Plus Postage and Packing.		

