

ILLAWARRA BROMELIAD SOCIETY INCORPORATED

NEWSLINK

April 2019



Landscaping With Bromeliads

**Photograph by Ray Henderson of Paradox Horticulture
Showing a section of his beautiful garden**

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- The Society is, by the holding of meetings, displays and competitions, to provide a forum for the people of the Illawarra region who are interested in the culture and collection of bromeliads.
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BANK DETAILS FOR FEE PAYMENT, ETC: Illawarra Credit Union; BSB No. 802249; Account No. 249 039 602

MEETINGS - The Society meets at 12.00 noon on the first Saturday of each month (except January and December) in the Laurel Room* at the Ribbonwood Centre, DAPTO. *Scribbly Gum room for November meetings only.

MEMBERSHIP SUBSCRIPTIONS - Due 30th June each year: \$15 single/\$25 family.

NEWSLINK ISSUED QUARTERLY - January, April, July, and October and at <http://www.bromeliad.org.au>

VISITORS ARE ALWAYS WELCOME

NEW MEMBERS: A very warm welcome to our new members Fran Parrott, John and Patricia Boyd, Judy Hunt, Richard Howard, and Rose and Domenic DiNoro who all signed up at our March meeting. It is lovely to have you back Rose and we wish you all a long and happy association with us!

MONTHLY RAFFLE PRIZE ROSTER:

April	- Jørgen Jakobsen, Steve Wain, Carol Burgdorf, June Casey
May	- Neville Wood, Ted Clare, Jan Stammers, Rhonda Patterson
June	- Jim Clague, Sandra Carnie, Beverley Irvine, June Smith
July	- Deniece Crutchley, Barbara Jones-Beverstock, Brian Smith, Maadi McKenna

ROSTER FOR CLEANING UP AFTER THE MEETING:

April	- Glenrae Barker, Christine Stephens, Pam Townsend, June Smith, Deniece Crutchley
May	- Denise Wetzel, Ana Mallon, Cheryl Mathews, Jan Thoroughgood, Glenn Martin
June	- Monika Rose, Ann Kennon, Noel Kennon, Robyn Stanford, Carol Burgdorf
July	- Elizabeth Bevan, Graham Bevan, Maadi McKenna, Yvonne Perinotti, Bob Stephens

GENERAL MEETING – 6th APRIL, 2019 – Neville Wood will be giving a Power Point presentation concerning The World Bromeliad Conference of 2006 held in San Diego, California.

WORKSHOP #1 – SATURDAY, APRIL 13 – PROPAGATING BROMELIADS: This will be held at the home of Sharyn Baraldi, 25 Antrim Avenue, Warilla (4296 2166), starting at 10.00 am with tea/coffee (please bring slice/cake to share). Michael Drury, with assistance from Belinda, will demonstrate and speak on this topic, covering propagation of bromeliads from: (i) seed; (ii) pups; and (iii) by tissue culture.

Michael will show how to collect seed and take pups, then how to prepare them for propagation. Members having any plants with well-developed seed or mature pups are asked to bring them along so that demonstrations can be given. Questions about any aspects of this subject will be welcomed. Please bring your lunch to enjoy after the tutorial has concluded. The Workshop should finish up around 2.00 pm.

GENERAL MEETING – MAY 4, 2019: Edwina and Steve Wain will present a Power Point on their *Photographic Tour of Colombian Bromeliads*.

GARDEN VISITS #2 - SATURDAY, MAY 18, 2019: We will start at 10.00 am at Val Miller's home (35 Whitely Place, Brownsville) where Val will provide drinks for morning tea so please bring cake or slice to share. At about 11.15 am we will head off to Deniece Crutchley's at 184 Bong Bong Road, Horsley, leaving there at about 12.15 pm for Bob Stevens' at 21 Forest Street, Oak Flats. Bob and his wife will do tea and coffee for lunch—bring your own—and so again slice or cake to share will be welcome. The visits should end at about 2.00 pm.

GENERAL MEETING – JUNE 1, 2019: Graham Bevan will be presenting a tour of the Bevan's garden—and, in particular, *'That Bottlebrush'*!

GENERAL MEETING – JULY 6 - CHRISTMAS IN JULY: Soup 'n Sweets with another of Noel's quizzes as entertainment.

UPCOMING EVENTS . . .

May 11 – 12	BROMELIAD SOCIETY OF AUSTRALIA – AUTUMN SHOW AND SALES – FEDERATION PAVILION, CASTLE HILL SHOWGROUNDS – Saturday 9am – 4pm/Sunday 10am – 3pm
Sep. 7 - 8	ILLAWARRA BROMELIAD SOCIETY SPRING SHOW – Uniting Church CORRIMAL
Oct. 17 - 20	GOLDEN BROMS – 20TH AUSTRALASIAN BROMELIAD CONFERENCE – SEA WORLD, GOLD COAST - Registration to June 30 - \$350/\$375 thereafter. <goldenbroms.com>

THE MERI STEFANIDAKIS MEMORIAL TROPHY

*Awarded for the photograph in the Annual Photographic Display
that best captures the spirit of the culture of bromeliads*

*We thank Beth and Jim Clague and Monica De Clouett for proposing and donating this Trophy
to commemorate the memory of Meri Stefanidakis*

CONDITIONS OF THE DISPLAY

- The Illawarra Bromeliad Society Inc. shall hold a Photographic Display each year.
- The Display will be held at the November General Meeting.
- Entry in the Display is restricted to members of the Society and all members are eligible to enter.
- The subject of the photographs must concern some aspect of the culture of bromeliads.
- Each member may submit up to three photographs.
- Each photograph must be taken in the year of the Display and by the member submitting it.
- The photographs must be “postcard” size (10 cm x 15 cm) and may be in colour or black and white.
- The orientation of the photograph may be portrait or landscape.
- A border on the photograph is optional.
- The photographic print may be made commercially or by the member submitting it.
- Entries must be submitted to the Competitions Officer of the Society in a plain envelope before conclusion of the October General Meeting of the Society.
- Each photograph must be submitted in a separate envelope, have a sticker on the back showing the name of the member submitting it, and be accompanied by a separate 5 cm x 10 cm card showing the date the photograph was taken, and a suitable title for the photograph. Nothing else.
- Any photograph that does not conform to the requirements set out here will not be eligible for entry.
- The Competitions Officer will arrange for the entries to be displayed for inspection and judging by popular vote at the November General Meeting.
- In judging this competition, members are urged to apply “awarded for the photograph that best captures the spirit of the culture of bromeliads” to the best of their ability.
- The results of the vote will be announced at the December General Meeting and the member who took the winning photograph will be awarded the Trophy for that year.

February 2 , 2019: Plant Results

Open:

1 st	Rhonda Patterson	<i>Guzmania wittmackii</i> (variegated)
2 nd	Beth Clague	<i>Neoregelia</i> 'Tiger Tim'
3 rd	Bob Stephens	<i>Vriesea</i> 'Rafael'

Novice:

1 st	Glenn Martin	<i>Guzmania</i> 'Hope'
2 nd	Ana Mallon	<i>Neoregelia</i> 'Donna'
3 rd	Glenn Martin	<i>Aechmea fasciata</i>
3 rd	Glenn Martin	<i>Neoregelia carolinae</i> (albo-margined)

Tillandsia and Other Small Genera:

1 st	Steve Wain	<i>Tillandsia capitata</i> 'Scarlet'
2 nd	Belinda Drury	<i>Cryptanthus</i> 'New Coster's Favorite'
2 nd	Ann Kennon	<i>Cryptanthus</i> 'Pomegranate'
3 rd	Beth Clague	<i>Tillandsia leiboldiana</i>

March 2, 2019: Plant Results

Open:

1 st	Rhonda Patterson	<i>Goudaea ospinae</i> (previously <i>Vriesea ospinae</i>)
2 nd	Ann Kennon	<i>Cryptanthus bivittatus</i> 'Ruby'
3 rd	Graham Bevan	Dyckia
3 rd	Ann Kennon	<i>Neoregelia</i> 'Mini Skirt'

Tillandsia:

1 st	Suzanne Burrows	<i>Tillandsia punctulata</i>
2 nd	Suzanne Burrows	<i>Tillandsia punctulata</i>
3 rd	Suzanne Burrows	<i>Tillandsia</i>

PRE-WINTER CHORES IN THE GARDEN AND THE GREENHOUSE

By Gerry Stansfield (Extracted from *Bromeliad*, J. BSNZI May 2018 Vol. 58 No. 5)

Around about this time we usually give out some advice to our newer members and perhaps a reminder to others, about the few things we should do before the onslaught of the cold winter months. There is one job we must do prior to winter, and it is extremely important to do it now rather than waiting for the usual spring clean-up—**dead leaf our plants.**

Unlike spring and summer, the dead leaves in the winter can and do start to rot and break down. This can very quickly turn to bacteria and viral infection. You might say, 'How does that happen?' Well, actually, we do know quite a lot about rotting vegetation. After all, that's what composting is all about. However, the important difference between composting and dead leaves next to our bromeliads is that in composting we allow the temperature of the compost to rise dramatically which generally kills any pathogenic and viral bacteria, and leaves us with the lovely sweet-smelling compost. This does not happen with dead bromeliad leaves! How does this bacteria get into our plants? All bromeliads have trichomes, and we know that these trichomes are there to facilitate the absorption of water from rain and nutrients, and we also know that they are quite capable of absorbing matter from decaying vegetation.

It is well known that carriers such as animals, insects, mites, aphids, nematodes, mealy bug, scale and the sucking or chewing type of slugs and snails, etc. are all potential viral disease carriers, and by chewing and sucking at our plants they can and do pass on forms of infection that can attack the stomata pores of the bromeliad leaves and of course also the stem cells. **By getting rid of the dead leaves we are helping our bromeliads to continue to grow and stay healthy**

Introduction: The family *Bromeliaceae* is one of the most diverse families of *Angiosperms* (flowering plants) on the planet. With approximately 3,000 species and more than 30,000 hybrids and cultivars the range of collectable plants is enormous. Although mainly indigenous to central and southern America these plants are represented in nearly every ecosystem including rainforests, deserts, alpine situations and coastal environments. The variation in habitats and associated environmental conditions these plants are adapted to tolerate means for gardeners a range of plants exists for almost every situation imaginable. The challenge is to decide which plants are likely to perform well naturally and the adjustments that may be needed to improve the performance of some chosen species and cultivars. A good plan to start with plant selection is to establish the environmental conditions of the natural habitat of the plants we consider interesting. This is relatively easy for the naturally occurring species; however, this task can be difficult with the myriad of hybrids in existence today, especially with intergenerics. Like all plants a number of abiotic (non-living factors) need to be considered when selecting plants, placing plants and growing bromeliads in the landscape.

The key factors to consider are: light; growth habit; temperature; media or substrate; water; nutritional requirements.

Light: This is the most critical factor to consider for most bromeliads; some are quite specific in their light requirements and other species and cultivars can be successfully cultivated in a range of light regimes. For many plants (e.g., neoregelias) inadequate light results in poor colour and undesirable plant structure with elongated weak leaves. Excessive light for some bromeliads (e.g., guzmanias) causes scorching of the foliage which, if extreme, can result in the death of the plant. The light regime considered optimum for these plants can vary considerably within Australia because the overall ambient conditions can be quite diverse. If information is not readily available on the preferred light regime for a particular plant some rules of thumb may be useful but, unfortunately, these generalizations do not always apply. Plants with grey, silver or bluish leaves are able to reflect the sun's rays and can probably tolerate full sun. Red, pink and purple colours are attributable to the presence of pigments called anthocyanins in tissue and act as sun block for tropical plants. Plants with these colours usually perform well in bright light if not full sun. Sun-loving species usually have stiff, thick leaves whereas shade-loving species such as *Guzmania* spp. usually have thinner, softer leaves.

Genera suitable for full sun in most localities include: *Ananas*; *Alcantarea*; *Dyckia*; *Hechtia*; *Puya*; *Orthophytum*; *Portea*; *Aechmea*—a few species and cultivars (e.g., *A. blanchetiana*); *Neoregelia*—a few species and cultivars (e.g., *N. 'Sheba'*).

Genera suitable for bright light include: *Aechmea*—many species and cultivars; *Neoregelia*—many species and cultivars; *Tillandsia*—green leaf forms; *Vriesea*—patterned leaf forms; *Ursulaea*; *Billbergia*.

Genera suitable for shade include: *Cryptanthus*; *Nidularium*; *Guzmania*; *Canistrum*

Temperature and Available Moisture: Many plants are tolerant of a wide variation in temperature; others, in particular coastal species, are not so tolerant. Some bromeliads are tolerant of low temperatures (i.e., near 0°C) but only for a brief period of time. Both excessive heat and cold can cause irreversible damage to plants. Plants severely damaged by excessive heat or cold usually become quickly infected with a fungal organism called *Cladosporium* which results in collapse of tissue. Water preferences vary considerably between and within genera. As a generalization the tank bromeliads require less frequent watering than those unable to store water. Excess water renders plants more susceptible to diseases both fungal and bacterial. Inadequate water for prolonged periods results in shrinkage of tissue and eventually necrosis of part or all of the plant. Sometimes plants suffering from dehydration can be revived with a generous soaking.

Media, Nutrition, etc.: Plants in *Bromeliaceae* can be categorized into one or more of the following categories: Terrestrial—naturally grow in soil; Epiphytes—grow on living trees or other plants; Saprophytes—grow on dead timber; Lithophytes (saxicolous)—grow on rocks. From the gardeners' perspective the plants in the latter three categories are grouped and generally referred to and treated as epiphytes.

With appropriate cultural practices most epiphytes can be grown successfully as terrestrials or in containers. The strictly terrestrial species and cultivars cannot be successfully grown as epiphytes. Epiphytic species need ample air around their roots and if grown as terrestrial or container plants should be planted in a medium or substrate with at least 20% air-filled porosity. The medium should be adjusted if necessary to a pH that is neutral to slightly acidic (6 to 7).

Epiphytic species generally perform best when fertilised with a slow release fertiliser which has a higher percentage of potassium than nitrogen. Most epiphytes have the ability to absorb nutrients into the leaves through the scale-like trichomes; liquid applications of foliar fertilisers at low dilution rates usually enhance growth and colour.

Terrestrial species generally require less air in the root zone. The preferred pH for terrestrial species varies considerably. In nature members of the genus *Ananas* (pineapples) grow in acidic conditions with a pH of approximately 5. *Cryptanthus* and *Guzmania* prefer a pH closer to neutral of approximately 6. Not all terrestrial bromeliads are able to absorb nutrients through their foliage; however applications of a diluted soluble fertiliser to the root zone are usually beneficial.

Uses of Bromeliads in the Landscape: Bromeliads have many and varied uses as landscape plants, including: As accent and feature plants—choose large-growing plants (e.g., *alcantareas* and *Aechmea blanchetiana*) or plants with spectacular inflorescences (*Aechmea fasciata* and *Ursulaea*); understory plants to fill areas and add interesting colour (e.g., neoregelias, vrieseas, guzmanias, cryptanthus, and billbergias); rockeries (many species); as epiphytes to decorate trunks and branches of existing trees (many species); as container plants—both pots and hanging baskets; as climbing plants (use stoloniferous species); to provide habitat for frogs (tank species); interior scaping (choose plants that naturally occur in low light (e.g., guzmanias).

Plants from the family *Bromeliaceae* have infinite potential in the created landscape, the main limiting factor being the imagination of gardeners, both amateur and professional.

BLENDING THE LANDSCAPE WITH BROMELIADS

By Len Butt (Reprinted from *Bromeliaceae*, J. of Bromeliad Society of Queensland, January/February 1997)

The September-October issue of *Bromeliaceae* featured an article entitled '*Participation at the R.N.A.*' which brought back pleasant memories for me. I can still remember the comments I wrote in our society journal all those years ago about the beauty of the first R.N.A. display. In your article you wrote about a water feature at the foot of a tree and you also mentioned a collection of rocks where the combination of these in today's landscape gardens can turn an ordinary backyard into an area that is in harmony with nature.

Gardens can be small in size, or really lavish on acreage, and if the correct flora is used to suit the shape and environment both home owner and wildlife can enjoy the result. In many situations, when the basic needs of suitable trees and shrubs have been met, there often occurs the need for different plants to fill a corner, decorate a rockery, or create an atmosphere with water. Most rockeries are furnished with small perennial plants, or succulents. However, it is possible to use many species of bromeliads to achieve a better effect around a pool or rockery. Using bromeliads as garden pool surrounds, on sloping terrace banks, among rock formations, or fitted as epiphytes in existing trees is now popular with professional landscape gardeners.

The handyman can create and fashion at least one garden pool. These days this does not present the handyman with hours of labour. It is possible to purchase oval, kidney-shaped or irregular-shaped pools, in fibreglass or cement at quite economic prices. Once the pool is in place it is easy to decide where to place rock and other decorative material. Waterworn rocks about the size of a football or even larger should be used. These can generally be found at creek crossings, or out-of-the-way creek beds; the alternative is to purchase them from a landscape garden supplier. You will need small tree stumps, again with centres hollowed out;. A supply of rough river sand, plus quantities of leaf mould or peat moss are needed for planting your bromeliads in and around the rockery setting.

Your pool can be central or placed near a fence, or perhaps at the base of a tree, as this type of rock pool is an individual thing as it can bring out latent talents in most of us. Arrange the rocks around the pool to your particular liking, but, as a suggestion, make one side higher than the other in the form of a hillock. Fill in between the rocks with a mixture of sand and leaf mould plus some peat moss. In these crannies a selected range of bromeliads can be placed. If your pool rockery is exposed to partial sunlight, use the terrestrial bromeliads such as ananas, dyckia, hechtia and some aechmeas. All of these will tolerate a fair amount of sun. In a shaded position, use such plants as nidularium, vriesia and canistrum. For the situation of sun for part of the day, many forms of neoregelia, aechmea, billbergia and quesnelia are suitable. Although some of these forms are epiphytic, they will adapt to rockery conditions provided adequate drainage and a good planting medium are used. With good light these plants will gain vivid foliage colour in these situations.

Small dead logs with a hollow centre can be used to accommodate several bromeliads if openings can be made on the sides so as plants can be fitted into them, giving the appearance of growing there in their natural state. Potting mixtures or pine bark can be used to fill up the hollow centre of the logs, and, when completed, you must seal off each end of the log. These logs can be placed in the rockery or simply (if large enough) placed across the pool like a fallen log 'bridge'. Tree stumps usually need drainage holes bored in them before filling the cavity with potting mix and planting a sizeable bromeliad in each. These can be placed around your rock pool. The number used depends on the size of your project.

Ferns seem natural among bromeliads. On the north coast I recall a nursery had its shade house attached to a rock face wall. It is an impressive face of irregular rock, split with large cracks where mosses and ferns grow in abundance. The nurseryman had fitted many bromeliads into the cracks and now with the developing ferns as a soft fill-in, the wall is a sight worth seeing. Much the same effect can be achieved with sharply sloping banks. So if your land has a steep slope, you might build rock walls for ferns and bromeliads. In this situation small varieties of other plants such as cordylines, dracaenas, aralias and the small growing sacred bamboo, can be used to create a tropical outlook

A note of warning, however: the method of trial and error used by most of us regarding plants in new places can be costly. All plants to be used in situations of more intense light should be acclimatised first by letting them gradually become accustomed to the brighter light of their new environment before actually setting them in place.

In a very demanding world of landscape architecture and home gardening there is always the constant need to find something different and new by way of plant material to fill the gap between the ordinary and the outstanding. I have always been in favour of careful blending of native and exotic plants where they fit into the scene, and are compatible. Bromeliads are a natural choice.

AND JUST ANOTHER THOUGHT--FROM ARNO KING--TO CONSIDER--<gardendrum/2012/04/16>

Giving the example of *Aechmea blanchetiana* 'Rubra', which with heat, humidity, moisture and just the right position, the plant 'glows orange' but like with many bromeliads you have to find just the right position to get the best colour. Too hot and sunny and the plants may bleach or burn...too shady or cool and the colour fades away. Arno suggests propagating a few plants and placing them in appropriate areas of the garden. When you hit the right spot move your plants there for a stunning mass planting.

KATYDIDS AND CLENSEL

By Neville Wood, Illawarra Bromeliad Society Inc.

How many of us have been shocked to find our favourite bromeliad with the beautiful leaves chewed or an inflorescence bitten almost through and immediately thought that the culprit was a grasshopper. But no matter how thoroughly we searched we couldn't find any trace of the offender.

Grasshopper Damage

Grasshoppers come in various colours and sizes but they all have one thing in common: they are all destructive! Once grasshoppers find a nice source of food they usually hang around until caught and killed, and they're not always easily seen as they hide beneath the leaves. The best time to see them is when watering in early morning or late afternoon and this is the best time to catch them also as they seem to be very sluggish in their movements during these cooler parts of the day, and as soon as the water comes near them they try to get away from it and at this time they're more vulnerable, easily seen, caught and killed.



Sometimes, no matter how much you search, you never find the grasshopper which means they have either moved on to greener pastures or possibly they weren't the offending insect in the first place.

The culprit may well have been an insect called a "Katydid" which are similar to grasshoppers and are just as destructive, but they mostly do their work at night. So go and check over your plants with a strong torch; but be warned, they are masters of camouflage and not easily seen, such as the one in the picture below which looks like a leaf.



I haven't seen any of these or grasshoppers since I started using a product called "Clensel Insect and Mite Killer" spray which I purchased from the sales table at our local bromeliad society monthly meetings. This product is a natural and efficient garden pest controller and is an effective weapon against many common garden pests such as aphids, spider mite, psyllids, mealybugs, green fly, white fly and scale insects. It is organically certified and has been an effective natural controller of various garden insects and pests for over 25 years, long before being "green and natural" was the "in thing", and is a proven product with an avid following.

Clensel is not a poison; it contains Oil of Citronella which is a plant-based insect repellent with strong, anti-fungal properties. Unlike pyrethrum-based insect sprays, Clensel will not kill all insects, especially beneficial garden insects needed for cross pollination, such as bees.

It's safe for indoor use, washes off easily with water, has no withholding period, nor is it harmful to the soil. It can also be used on most plants and flowers, including fruits and vegetables (for your delicate plants just use a more diluted solution).

Clensel does not contain petroleum-based ingredients (such as Paraffin). It contains Potassium Oleate, which is obtained from potassium salts and a mixture of natural fatty acids, which coats leaves in a protective cell and being an ecological insecticide is ideal for usage in glasshouses.

I don't spray it on my plants as recommended, but just occasionally spray around and under the pot rim and the pot base. I also do this routinely each time I repot all plants and find it works effectively and seems to keep insects away when used in this way. It's most likely the repellent action of the Oil of Citronella in the insecticide that acts as a deterrent, and since I started using it in this way five years ago I haven't seen any sort of chewing insects on my plants. Friends tell me it's also very effective when sprayed on the different types of scale, and as it isn't petroleum based like many pest oil sprays it should be well suited for use on bromeliads.

Many growers are now becoming more aware of the toxic effects of many commonly used insecticides, fungicides and weedicides and the long-term devastation they can cause to our environment and I think Clensel can be used with confidence as a suitable natural alternative in the control of many common insect pests.

I hope the above information may help other growers to control these destructive chewing insects in a way which is effective, yet less harmful to the environment.

CINNAMON ... my 'natural helper'

By Ralph Starck (Reprinted from *Bromeliad*, J. BSNZI, February 2019 Vol. 59 No. 2)

I saw a television ad on 'Root Blast' and wondered if a rooting hormone would help my pups establish roots quicker. I took to Google and read about 'the benefits of cinnamon on plants': using cinnamon for pests, cuttings and as a fungicide. The benefits were listed as:

1. **Cinnamon for pests:** If you have a problem with ants in your home or greenhouse, cinnamon is a good deterrent. Ants don't like to walk where cinnamon powder lays, so summer ant problems will be decreased.
2. **Cinnamon as rooting agent:** Cinnamon as a rooting agent is as useful as willow water or hormone rooting powder. A single application to the stem when you plant the cutting will stimulate root growth in almost every plant variety. Give your cutting a quick start with the help of cinnamon powder.
3. **Cinnamon fungicide control:** Damping off disease is a fungus-based problem that hits small seedlings just as they begin to grow. Cinnamon will help prevent this problem by killing the fungus. It also works with other fungal problems exhibited on older plants.

4. **Healing plant wounds:** Cinnamon is great for the plants suffering from wounds. Dust cinnamon on the wound to help promote fast healing by sprinkling cinnamon dust onto the plant's wound.

I thought I would try this out, bearing in mind there are many 'old wives' tales' out there. I find it works for me and three years later I am regularly using cinnamon. I now buy a large bag for about \$10 and this lasts for ages.

I put the cinnamon in an old Marmite jar, about half full, and when I remove the pup from the mother plant I dip the pup into the cinnamon and make sure the base gets a good coating and then pot up the pup as normal. I treat the scar area on the mother with cinnamon and apply it to the scar area with a basting brush.

I thought I would share my experience with Journal readers and you can make of it what you will. Of course, you may want to file all this away in the 'old wives' category'!

WHY HUMIDITY IS IMPORTANT TO PLANTS

(Taken from February 2007 *Newsletter* of the BSNSW – article courtesy Cumberland Orchid Circle 'Orchid News', January 2007) – with note from the then BSNSW Editor, Alice Williams: Although this article was written in relation to orchids it definitely applies to bromeliads. Keep up the humidity by damping down floors and benches. When able use a misting nozzle. Other hints: Hang wet material (heavy towelling, old carpet); place containers of water on floor under benches; install a humidity gauge.)

All plants inhale carbon dioxide through their leaves. This gas is used in photosynthesis. As the plant opens its leaf pores to take in carbon dioxide, some of the moisture in the leaf can escape. Thus the plants sweat water vapour into the air whenever they breathe.

Dry air causes plants to transpire moisture much more rapidly than does humid air. Water in the leaves evaporates very quickly into air, causing the plant to lose moisture at a rapid rate. When leaves begin to lose water faster than the roots can absorb it—disaster strikes. It is an evil that the plant inflicts on itself, in self-defence. In order not to lose more water to the air the plant will almost completely close its leaf pores. This slows down the flow of moisture from the plant effectively, but unfortunately it also reduces the intake of carbon dioxide. Without carbon dioxide, the cells begin to die and the plant looks tired and ill.

The important point to remember is that dry air pulls water out of the leaves faster than the roots can supply the leaves. Under these conditions it doesn't matter how much you water such plants it doesn't help. Overwatering only reduces the amount of air in the soil and invites root rot.

When plants have the right humidity they thrive because they open their pores completely and so breathe deeply without threat of excessive water loss. When the air is moist there is little water loss from the leaf. Damping down the benches and surrounds, also misting leaves will keep the air moist. Rapid temperature rises damage orchids too.. It means that the plant's leaves become warm and physiologically active, while the root system in its solid rooting medium is still cold and consequently physiologically dormant. The active leaves are demanding large quantities of water and nutrients which the root system cannot possibly supply.

Under these conditions photosynthesis, transpiration and other vital plant processes are severely restricted and, as a result, developing flower growth and new growth are damaged. Rapid rises in temperature on sunny days can be avoided by opening vents or doors early in the morning and letting the greenhouse warm up gradually.

A humid atmosphere that is not moving is particularly undesirable also. Damp, stagnant conditions encourage mould and bacterial diseases. A constantly moving, light and buoyant atmosphere keeps orchids vigorous and healthy.



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