

**ILLAWARRA BROMELIAD SOCIETY
INCORPORATED**

NEWSLINK

July 2020



Tillandsia punctulata

Photograph by Noel Kennon

Winner of the Meri Stefanidakis Memorial Trophy

Award for 2019

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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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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

SUSPENSION OF ACTIVITIES: With the current COVID-19 situation and all of the uncertainty our July meeting is definitely cancelled but the committee, towards the end of July, will discuss whether or not our AGM can go ahead in August and also whether or not our Show will go ahead this year.

We have heard that it is around 95% certain that *Spring into Corrimal* will not go ahead this year and as there are so many requirements to be met for the hiring of the Uniting Church Hall for our Show this is something that our committee will look into later on in the month of July. However, in the event that our Show should go ahead I am providing a copy of the schedule that we usually use on the back page of this issue of *Newslink*.

I do hope that your gardens have enjoyed the recent rains and perhaps your extra company during these months of lockdown—and should the Show go ahead that you will have some lovely plants for display and competition.

Other events, previously advertised, including the World Bromeliad Conference which was to have been held in Sarasota, Florida in June of this year has been postponed until June 8-12, 2021, and Kiwi Broms has also been postponed until April 2022.

As you will recognise, everything regarding our Society's activities is uncertain at this time but you will be advised by email when we know more. As I'm still unable to get to Officeworks for printing up of *Newslink* I will send this July issue electronically; however, I will have the hard copies ready for distribution when things are safer to do so.

MEMBERSHIP FEES FOR 2020-2021: Our Committee has decided that due to the uncertainty of when we might get back to our meetings, etc.—and because of meetings already missed—we will dispense with the payment of membership fees for the period July 1, 2020 to June 30, 2021.

UPCOMING EVENTS:

All being well, upcoming events to look forward to will be:

Sep. 12 - 13 Sep. 26 - 27	ILLAWARRA BROMELIAD SOCIETY SPRING SHOW – Uniting Church Hall, CORRIMAL BROMELIAD SOCIETY OF AUSTRALIA SPRING SHOW – FEDERATION PAVILION, CASTLE HILL SHOWGROUND – Saturday 9 am – 4 pm/Sunday 10 am – 3 pm
<u>2021</u> June 8 - 12	WORLD BROMELIAD CONFERENCE 2021 – THE BIG SHOW – HYATT REGENCY HOTEL, SARASOTA, FLORIDA with tours to two of the world's leading bromeliad nurseries— <i>Michael's Bromeliads</i> and <i>Tropiflora</i>.
<u>2022</u> April 7 - 10	KIWI BROMS 2022 – 21ST AUSTRALASIAN BROMELIAD CONFERENCE, Waipuna Hotel, AUCKLAND, NZ – Registration NZ\$325 through end of 2021. See <kiwibroms.bsnz.org> for further details.

WEB LINKS FOR CHECKING CORRECT IDENTIFICATION AND SPELLING

Bromeliad Cultivar Register (BCR): <http://registry.bsi.org/>

Refer to this site for correct identification and spelling of your hybrid or cultivar.

New Bromeliad Taxon List: <http://bromeliad.nl/taxonlist>

Refer to this site for latest species name changes and correct spelling

Bromeliads in Australia (BinA): <http://bromeliad.org.au>

Refer to this site for its Photo Index, Club Newsletters, Detective Derek Articles

TILLANDSIA PUNCTULATA (Cover photograph by Noel Kennon)

Tillandsia punctulata—also known as Mexican black torch—is native to Central America (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama) and Mexico where it thrives in warm and wet conditions.* It is found at various altitudes, ranging from 0 to just over 2250 metres above sea level.

It is a medium-sized species with many curved leaves that form a fine rosette with bright green and purplish green leaves. It produces upright spikes of four to six tubular, white-tipped violet flowers with green floral bracts.

From Paul Isley III's book, *Tillandsia II*, "*Tillandsia punctulata* is often confused with *Tillandsia tricolor* because it is similar in appearance and both have the same papery leaves. But these are differences that make these two species easily distinguishable. The bases of *T. tricolor* are brown, and those of *T. punctulata* are usually a maroon so dark as to appear almost black. In addition, virtually every specimen of *T. tricolor* has a series of chestnut-coloured dots as the sheaths blend into the green of the blades. The sheaths of *T. punctulata* are wider, the blades brighter green, and the tips recurve. The leaves of *T. tricolor* are stiffer. Both species produce stoloniferous offsets, but the runners of *Tillandsia tricolor* are tougher and thicker."

*From an article, *A Geography Lesson*, by Carol Johnson of Florida, which appeared in the Journal of The Bromeliad Society, November-December 1989, Vol. 39(6) I have extracted the following:

Prospective bromeliad buyers most often ask: 1. How much light is best for this plant" and 2. Will it take cold if planted outdoors? Rarely do they ask, "Where does this plant come from?" Yet this is the most important of all information required to grow bromeliads successfully and the answer to this question will also settle the first two. Geography plays a major role in the growing of our plants—altitude, moisture, and heat go along with this.

Light. For many years I struggled to grow Tillandsia punctulata without much success. It neither lived nor died. Then, in Mexico, at about 3,500 feet, we collected Tillandsia punctulata. It was growing in the tree tops in cool, dense shade and nurtured by wet, rotted leaf mould. This taught me a lesson about the tillandsias. All those years I had lumped all tillandsias together, as sun-loving, dry-growing epiphytes. Now I know that every tillandsia, in fact every bromeliad, should be researched before becoming part of a collection.

EFFECT OF NUTRIENT AVAILABILITY ON TILLANDSIA SEED DEVELOPMENT

From the files of Andrew Flower, Notes by Diane Timmins

Reprinted from ***Bromeliad***, Journal BSNZI, May 2020, Vol. 60 No. 5.

Andrew Flower of *Anwyl Bromeliads* has an extensive collection of tillandsias, and has been successfully growing species and hybrids from seed for many decades. Based on nutrient trials with species seedlings, and element analysis of desiccated plant leaves, he has documented experimental procedures in a controlled environment and reached some interesting conclusions. One incidental observation was the effect of nutrient availability on tillandsia seed development. Andrew had batches of seedlings grown from the same species at different times.

In one species the first batch was sown in the Northland greenhouse, in the days when he did not fertilise much. They received only local day lengths—no artificial light. A couple of years later they were transferred to Pukerua Bay and eventually moved into the new growing-on house.

Over the next couple of years Andrew experimented with different nutrient solutions (you can refer to his article in the BSI Journal 57(1) 2006. It is also on the ANWYL Bromeliads website (www.anwyl.com) under Information tab, articles, 'Sources of Nitrogen'). He started an upgraded nutrition regime for the seedlings. He also started germinating seed under lights in an incubator, and giving them 12 hour day lengths under fluorescent lights.

So, to get to the point:

Year 1 – first batch of seed germinated in Northland.

Year 3 – first batch of seed moved to Pukerua Bay growing-on house.

Year 5 – enhanced nutrition started in Pukerua Bay.

Year 6 – second batch of seed germinated in Pukerua Bay incubator, with 12 hour day lengths.

Year 7 – second batch of seed moved to Pukerua Bay growing-on house.

After a couple of years Andrew noticed that the second batch of seedlings were about the same size as the first batch, despite them being 5 years older! From then on the second batch kept growing faster than the first batch—even though they were now growing side-by-side.

The conclusion he came to was that the seedlings develop a metabolic rate during their early year(s) that is related to the richness of their environment. The growth rate does not accelerate as quickly when they move into a richer environment as do seedlings that started life in the richer environment.

In other words, nutrient availability in the initial development of a seedling is critical to its ongoing growth rate. The first batch of seed just kept falling further and further behind the second batch, even when they got to be grown in the same environment.

BROMELIACEAE – A LAYMAN’S GUIDE PART 10 – ADDITIONAL SUB-FAMILIES AND GENERA – Compiled by Drew Maywald – Reprinted from FNCNSG June 2020 newsletter

Bromelioideae: There are a number of relatively new *Bromelioideae* genera about which very little data is available. These genera and the number of species and cultivars in each one are listed below. Many of the species of these genera have been reclassified from other genera, and many are not common in cultivation..

- **Forzzaea:** pronounced for-zz-a’ea. Three species and no cultivars. Species previously classified as *Cryptanthus*.
- **Hoplocryptanthus:** pronounced hoplo-crypt-anth’us. Eight species and no cultivars. Species previously classified as *Cryptanthus* or *Lapanthus*.
- **Lapanthus:** pronounced: lap-an-thus. Two species and no cultivars.
- **Rokautskyia:** pronounced rock-aut-sk’ea. Fourteen species and no cultivars. Species previously classified as *Cryptanthus*.
- **xHohenmea:** pronounced x-hohen-me’a. One species and 32 cultivars. The only species, *xHohenmea itaipuana*, is a natural hybrid of *Aechmea ramosa* X *Hohenbergia augusta*.

Tillandsioideae: Similar to *Bromelioideae* there are a number of relatively new *Tillandsioideae* genera about which very little data is available. Many of the species of these genera have been reclassified from other genera and many are not common in cultivation.

Barfussia: pronounced bar-fuss’ea. Three species and no cultivars. A couple of the species have been reclassified from *Tillandsia*.

Cipuroopsis: pronounced sip-u-rop-sis. Three species and no cultivars.

Goudaea: pronounced goud’ea. Two species and 4 cultivars. All species previously *Vriesea*.

Gregbrownia: pronounced greg-brown’ea. Four species. Previously *Mezobromelia*.

Jagrantia: pronounced jag-rant’ea: One species no cultivars. Previously classified as *Vriesea*.

Josemania: pronounced ho-zay-man’ia. Five species and no cultivars. Previously *Tillandsia*.

Lemeltonia: pronounced lem-el-ton’ea> Seven species, no cultivars, previously *Tillandsia*.

Lutheria: pronounced luth-er’ea: Four species, no cultivars. Previously *Vriesea*.

Pseudalcantarea: pronounced sood-al-cant-ar-ree’a. Three species. Previously *Tillandsia*.

Stigmatodon: pronounced stig-mat-o-don. Eighteen species. Previously *Vriesea*.

Waltillia: pronounced wal-till’ea. One species. Previously classified as *Vriesea*.

Zizkaea: pronounced ziz-kay’ea: One species, previously classified as *Vriesea*. -

Further to my listing of the various sub-families of *Bromeliaceae* in our April 2020 Newslink I missed these changes to *Hechtia*, which the following article helps to explain.

HECHTIA CHANGES – BAKERANTHA AND MESOAMERANTHA

By Mike Wisnev, San Fernando Valley Bromeliad Society editor (mwisnev@gmail.com)
SFV bromeliad Society Newsletter – December 2019

Professor Ramirez-Morillo and seven other authors broke seven species out of *Hechtia* and put them in one new genus and one resurrected genus. Ivón.Ramirez-Morillo, Katya Romero-Soler, Germán Carnevali, Juan P. Pinzón, N. Raigoza, C. Hornung-Leoni, R. Duno, and J.L. Tapia-Muñoz. **THE REESTABLISHMENT OF BAKERANTHA, AND A NEW GENUS IN HECHTIOIDEAE (BROMELIACEAE) IN MEGAMEXICO, MESOAMERANTHA.** Harvard Papers in Botany, Vol. 23, No. 2, 2018 pp. 301-312 (the “Hechtia Paper”).

Below is a typical *Hechtia* species—*Hechtia stenopetala*, with fairly stiff leaves and nasty spines—at the Huntington Botanical Gardens (HBG).



Depending upon who is doing the counting there are roughly 75 *Hechtia* species. A few grow in the U.S., and a few more in Central America, but most are in Mexico.

Unlike the vast majority of bromeliads, *Hechtia* are unisexual. This means individual plants have either male or female flowers. Most bromeliads have perfect flowers which means they have both male parts (stamen producing pollen) and female flowers (pistils producing egg cells). Interestingly, the flowers also have non-functioning and smaller parts of the other sex—e.g., female plants don't have stamens but have staminodia.

Below is a male *Bakerantha tillandsioides*, formerly *Hechtia tillandsioides*, at the HBG.



The changes were based primarily on a DNA study reported in another paper which I haven't seen. The most important point may be that *Hechtia* species are monophyletic. This means it is a good genus—no other species of different genera show up in the group and no *Hechtia* species show up in different genera.

However, the species fell within 3 different fairly well-resolved clades—the *H. tillandsioides* clade (4 species), *H. guatemalensis* (3 species) and the rest.

The first clade includes the well-known *H. tillandsioides* and *H. lundelliorum*, as well as the less well-known *H. caerulea* and *H. purpusii*. Unlike most other *Hechtia*, they have almost grass-like leaves—long, thin green (on top) and white lepidote (on bottom) and not very spiny. The flowers are pedicellate and relatively large (for *Hechtia*) and white, pink, or purplish. They all grow in the same geographical area, often on cliff walls.

“Because of its distinctness and ease of diagnosis, here we propose its recognition at the generic level in *Hechtioideae*, re-establishing the name *Bakerantha* proposed by L. B. Smith (1934).” Id at 302-3.

Below is a close-up of the inflorescence of *Bakerantha tillandsioides*.



Close up of male flower of *Bakerantha tillandsioides*.

Each flower is on a small stalk called a pedicel. The yellow pollen on the anthers at the top of the five stamen identifies this plant as a male. I presume that the small darker purplish conical structure at the base of the flower is the so-called pistillode of the male flower.

A Bit of History

You may recall that last month the Newsletter described *Eduardia selloana*, named after Eduard Andre. The *Hechtia* Paper notes that Andre first described *H. tillandsioides* as *Bakeria tillandsioides* in 1889. But *Bakeria* was already used for another genus, so Smith changed it to *Bakerantha* in 1934, but then later moved *Bakerantha* into *Hechtia*.

It is also worth noting that in 2010 Espejo-Serna and others (including Professor Ramirez) treated *H. caerulea* as synonymous with *H. tillandsioides*. "An analysis of the complex of taxa related to *H. tillandsioides* (Romero-Soler, 2017) required and morphological space of the group. This analysis also strongly supported the notion that *H. tillandsioides* was more closely related to *H. lundelliorum* than to *H. caerulea*. Id. at 307. The later DNA study by Ramirez and others supported this conclusion.

There is another *Hechtia lundelliorum* at the Huntington Botanical Garden. Interestingly, it is also female. Professor Ramirez has indicated that many populations seem to have a lot more males than females. Presumably, this is advantageous since it maximizes the chances that there will be pollen available for pollination if a female blooms.

The *H. guatemalensis* clade has three species. Its leaves are generally flexible with short, hard spines evenly spaced on the leaves.

The clade "is diagnosed by the following combination of characters: central inflorescences, flowers with ovary $\frac{3}{4}$ inferior, white (sometimes apically reddish) petals, and a distribution restricted to Central America, spanning the southern section of Mesoamerica III, from Belize through the dry areas south of the Motagua River close to the Guatemalan-Honduran border, then extending to northern Nicaragua, north of the lakes. This complex includes the following species: *H. malvernii* Gilmartin, *H. dichroantha* Donnell Smith, and *H. guatemalensis*. Because of its morphological distinctness and geographical circumscription, here we propose the new genus *Mesoamerantha* for this clade." Id at 303.

It is worth noting that most hechtias, but not all, have a superior ovary. This means the petals attach at the bottom of the ovary and the ovary sits atop the base of the petals. As noted in the above quote, *Mesoamerantha* have a $\frac{3}{4}$ inferior ovary, which means $\frac{3}{4}$ of the ovary is below the base of the petals.

The *Hechtia* Paper also noted that these *Mesoamerantha* species have the longest-lasting blooms, often up to a month, while most hechtias bloom for about a week. The individual flowers usually only bloom for a day or so.

As noted in other newsletters, while DNA studies show which particular taxa belong in a group, they don't tell you whether the group should be a genus or subgenus (or some other taxa) or just an unnamed clade. That is left for the botanists, based on the particular features of the various clades. In the case of this study all the *Hechtia* species fell together. Thus there were various options: treat some clades as new genera, treat some clades as subgenera, or do nothing. For the reasons described in the *Hechtia* Paper, the authors felt the best decision was to propose two new subgenera.

I had wondered if *H. epigyna* was closely related to *H. tillandsioides* and *H. lundelliorum*. It has similar soft green leaves, though they have many spines. It also has rose/white flowers. But the DNA study found it is rather distant. It grows to the north of the *Bakerantha* species and has a lateral inflorescence, while the *Bakerantha* species have terminal inflorescences.

PHOTOGRAPHING YOUR BROMELIADS

By Victoria Padilla (Reprinted from BSI Journal, 1981 Vol. 31(4))

When the poet Keats wrote "A thing of beauty is a joy forever," he did not have in mind the transitory loveliness of the bromeliad in flower. Although the owner of the plant may long carry with him a mental image of the inflorescence, he cannot adequately describe its beauty unless the plant has been faithfully reproduced in color. And here is where his camera comes in.

A grower can have no better record of his bromeliads than an album of color photos or a library of color slides.

Nearly everyone today possesses a camera of one sort or another capable of taking good black and white or color pictures. Why these are not always as good as they might be is not the fault of the camera so much as it is with the would-be photographer who shoots at random, blissfully unaware of the most rudimentary rules of photography. To cover all types of 35 mm cameras and situations the readers of the Journal may have would require a complete course in photography, and presented here are just a few hints that might be of help. This article, too, presupposes that the owner of a camera knows how to use it and how to read a light meter.

Equipment

The basic equipment necessary for photographing your bromeliads is a fairly good reflex camera, a tripod, an exposure meter (if not contained in the camera itself), a reflector, and a backdrop. The sun is your primary source of light and is generally used with excellent results. If a more controlled lighting effect is desired, photo flood lights are the best. A flatter and harsher effect is obtained with a flash or strobe light. If you can afford a good camera, such as a Nikon, Pentax, or Exakta, etc., that is fine; however, any single-lens reflex will do. After all, some of the worst pictures that this editor has seen were taken with the most expensive cameras, whereas the opposite has often been true. The tripod is necessary to keep the camera in place and steady, especially when long exposures are involved. Helpful, also, would be supplementary or interchangeable lenses, a lens adapter, and extension tubes. Extension tubes, used with a lens, will provide a greater magnification for very tiny flowers. In these close-ups it is almost essential that the reflex camera (which composes and focuses through its lens) be used. With this camera you can be sure that the slides will be just what you see in the camera.

A cable release will help to eliminate camera movement when the shutter is released. For daylight pictures you will also need a foil reflector, which you can make yourself by attaching aluminium foil onto a piece of board.

Lighting

There are four main types of lighting which a photographer may consider: daylight, photofloods, strobe, and flash. For the beginner, natural sunlight is probably the best and the easiest, and until he is an expert is probably the only light he should consider. It imparts an excellent tonal quality—so important in bringing out the true coloration of an inflorescence—but it can be variable in intensity and quality and thus difficult to control. Pictures should never be taken in the middle of the day—from 8 to 11 in the morning and from 2 to 5 in the afternoon are the best times. Too high a sun will top light your plant and cause dense shadows, strong highlights and lack of well-balanced color. Sometimes a striking effect can be obtained by a low sun backlighting the plant, but in this situation a reflector must be used to fill in the shadows. Be sure the lens is shaded.

If one must use artificial light, two photofloods and one small spot light are necessary to give the best results, placed where they bring out the best characteristics of the plant. Basically, the lighting that looks the most natural is the kind that appears to originate from a single light source, such as the sun, in outdoor photography.

The use of a flash is not generally recommended for color photography, since it usually gives a harsh and flat lighting. However, if a flash is necessary, carefully placed reflectors will help to smooth out the dark shadows.

Background

The background can make or break the pictures. For outdoor photography, foliage (out of focus) is excellent as this looks the most like the bromeliad's natural habitat. To keep the background out of focus it is necessary to open up the F stop and use a faster shutter speed. The brilliant blue of the sky is often effective, as is the shimmering blue of a swimming pool. What must be kept in mind is that the background should not be patterned, cluttered up with other objects, or distracting in any way, and should be far enough behind the plant so as not to cause shadows. Where a studied plant portrait is desired, the photograph should provide a backdrop. Black velvet is often used with great success, as it assures the greatest contrast and gives the plant a bold "cut out" appearance.

It is a good idea to have on hand several pieces of heavy cardboard, approximately 3 by 4 feet in size, painted in blue, aqua, green, etc., to be used as color backgrounds. The best rule-of-thumb for a background is to use a color that will best complement that of the inflorescence. For example, a greenish flower looks best with a red or magenta background. A light pink inflorescence can appear almost white next to a black background, but will be pink in front of an aqua setting. Usually a green background will bring out the magenta and red in an inflorescence, a blue background will bring out the yellow, and blue-green or aqua will bring out the red and pink. Pay attention to your background—it is all important for a good picture. How many times has the editor received films and had to discard them because the background was an old sheet (and it did not fill the picture), a back door or a group of distracting objects. Another thing is to keep the composition of the plant within the frame bold and full.

Taking the Picture

After the bromeliad has been posed against a suitable background, the lighting checked to see that there are no distracting shadows, the camera properly placed and focused, it is good to proceed slowly and check before snapping the picture. Check the image of the bromeliad in the camera for shadows, pose, sharpness, and general composition. Look away and then look again into the camera, checking for anything that might be amiss. Just before taking the picture check the light again with your exposure meter. Today most good 35 mm reflex cameras now have built-in meters and automatic shutters so that your exposure problems are at a minimum. Correct exposure should be measured by light falling upon the plant itself. Be careful when photographing very light or very dark plants. Your light meter can be fooled by these extremes. The meter can't tell the difference between a light-colored plant (*Aechmea orlandiana* 'Ensign' or *Billbergia* 'Fantasia') with very little light on it or a dark colored bromeliad (*Vriesea splendens* 'Nigra') or any one of the dark red leaved aechmeas with a lot of light on it. If the plant is very light in color, close down ½ stop less than the meter shows. Light foliaged plants are better photographed against dark backgrounds and dark plants against light backgrounds—this is especially true in black-and-white photography. Incidentally, with extension tubes, be sure to allow for the extra amount of exposure necessary for the increased lens to film distance.

Take several slides of your plant. Without changing the general setup, change the exposure slightly up and down on some of the pictures. Keep a record of your exposures and study your finished films to see which exposure is the best. With a little care you can take very professional-looking pictures.

ILLAWARRA BROMELIAD SOCIETY INC.'S
TWENTY-EIGHTH ANNUAL SHOW
SEPTEMBER 13TH AND 14TH, 2020



SCHEDULE

• **CATEGORY I - DIVISION I: HORTICULTURAL - OPEN**

Class

A	Aechmea - Individual specimen plant
B	Billbergia - Individual specimen plant or multiples permitted
C	Neoregelia - Individual specimen plant
D	Neoregelia - miniature – Individual specimen plant (Not to exceed 200 mm/8" diameter)
E	*Tillandsioideae - Individual or multiples permitted – May be potted or mounted
F	*Vriesea/Guzmania - Individual specimen plant
G	Bromeliad not listed in 'A' to 'F' - Individual specimen plant or multiples permitted

• **CATEGORY I - DIVISION II: HORTICULTURAL - NOVICE**

Class

H	Aechmea - Individual specimen plant
I	Billbergia - Individual specimen plant or multiples permitted
J	Neoregelia - Individual specimen plant
K	Neoregelia - miniature - Individual specimen plant [Not to exceed 200 mm/8" diameter]
L	*Tillandsioideae - Individual or multiples permitted - May be potted or mounted
M	*Vriesea/Guzmania - Individual specimen plant
N	Bromeliad not listed in 'H' to 'M' - Individual specimen plant or multiples permitted.

• **CATEGORY I - DIVISION III: HORTICULTURAL - DISPLAY AND MULTIPLE PLANTS**

Class

O	Colony of Multiple or Clump Plants--e.g., Aechmea, Neoregelia, Vriesea
P	*Mounted Tillandsias – minimum of two (2) established plants which may be the same or different
Q	Mounted Bromeliad(s) other than Tillandsias – Established plant(s) which may be the same or different.

• **CATEGORY II - ARTISTIC**

Class

R	Basket or Decorative Container – minimum of three (3) plants which may be the same or different. No embellishments.
S	Bromeliad Garden – Any Container – Embellishments may be used.
T	Artistic Arrangement – to consist of predominantly bromeliad material – Embellishment may be used.

- *This class includes *Tillandsia* and allies--i.e., those species affected by the recent name changes, including *Barfussia*, *Josemania*, *Lemeltonia*, *Pseudalcantarea*, *Racinaea* and *Wallisia*.
- *This class includes *Vriesea* and allies--i.e., those species affected by the recent name changes, including *Goudaea*, *Lutheria*, *Stigmatodon* and *Zizkaea*.
- In classes covering "Individual Specimen Plants", pups are permissible on the adult plant only if they are so small that their removal might jeopardize their survival.
- When allowing for multiple plants the key word is "interconnected"—i.e., they must all have a common root system.
- In horticultural parlance the key word is 'home', meaning that this is where the plant(s) has been growing in a natural fashion, either potted or mounted.
- In Category I individual specimen plants (excepting tillandsias) should be potted, unless otherwise noted.
- Pots for entries in Category I, Divisions I, II and III, must be either black or dark green plastic. However, exceptions are provided for classes 'G' and 'N' where non-decorative terracotta [clay] pots may be used for succulent bromeliads such as dyckias, hechtias, etc. and in Division III, class 'O', hanging (non-decorative) baskets are acceptable.