

# JOURNAL

## OF THE BROMELIAD SOCIETY

VOLUME 62(2): 49-96



MARCH - APRIL 2012



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Front Cover: *Tillandsia* 'Samantha', photo by Pamela Koide-Hyatt. Story on pg. 90



Back Cover: Close-up, *Tillandsia* 'Samantha' in grex, photo Pamela Koide-Hyatt. Story on pg. 90

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## CONFERENCE CORNER

be found on the BSI and FCBS web sites. Deadline to enter is August 1, 2012.

It's time to finalize those plans and head to Orlando for the 2012 WBC.

Registration information and hotel rates can be found on the web site, [www.bsi.org](http://www.bsi.org). The Caribe Royale is a lovely all suite hotel, furnishing, refrigerator, microwave and coffee pot in all rooms. The conference committee has worked to offer a fun-filled, educational week of events included in the registration fee.

The committee has added an Art Exhibition and Sale to the week-long event. The Open Call to all artists, all media has been issued. Entry forms can

The tours sound great! Home tours are included in your registration and are scheduled for Wednesday. Optional tours include Leu Botanical Gardens and a natural habitat area on Saturday and tours of commercial bromeliad nurseries on Monday.

Don't forget: If you or your club would like to learn more about what it takes to host a conference, just e-mail: [vicepresident@bsi.org](mailto:vicepresident@bsi.org).

Bonnie Boutwell  
BSI Vice President



[www.bsi.org/events/2012/Orlando2012.html](http://www.bsi.org/events/2012/Orlando2012.html)

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## Keeping Track Of Your Bromeliads

*Andrew Wilson & Dan Kinnard*

Most of us spend a lot more time maintaining the health of the plants we grow than in maintaining certainty of their identities. Retaining such vigilance may be a more tedious and less glamorous task but without it a whole collection will degenerate to the point where we give up in frustration. So, why not do it right and make it an interesting job, one that you look forward to rather than back away from when you check your plants? Some of the ideas offered here may make you rethink the process. There are three facets to the job, identifying the plants, labeling them and recording what you identified and labeled. All are essential. Many books have been written on bromeliad identification; we will deal only with the latter two.

Let us be clear at the outset; we are describing one of many possible ways you could go about keeping track of your plants. It is certainly not the only one and, for some people, it may not even be the right one. That choice depends on you. However, it is a way that should offer many private growers a practical management tool for their collections. It should also allow them to use it, with small modifications, for plants such as orchids, bulbs or cacti that they may be growing. Museums and public collections have constraints such as ease of public viewing, which could make some of the labeling techniques unacceptable.

The method proposed ties directly the labeling (signage) of plants with the maintenance of an inventory of those plants. They are not independent tasks. That may sound like it imposes an extra burden on the grower. It does, but only if the grower is not already maintaining an inventory. Otherwise, it is a time- and effort-saving procedure.

### Labels

With friends viewing your plants, there are few events more annoying than to see one admired and its identification requested, only to discover that your memory has lapsed and the label has gone, or is undecipherable. Yet, it's not uncommon for this to happen. Relying on the label that came with the plant or scratching a name with a pencil on a tag is better than having no identification attached but it's not a technique that will last for long. People will swear that a black graphite pencil mark on a vinyl tag lasts forever. It may survive for some years in sunshine but if handled, even infrequently, with moisture upon it that dark marking will become pale and illegible. 'Permanent' marker pen names will likely not last even so long as that unless you choose indelible India ink, a choice that you will regret each time you labor to inscribe with it. Once a bromeliad is identified it should have a label that is both clear and long-lasting. By 'label' we mean a tag that bears the identity and other relevant information about the plant. It should remain clear, no matter whether it is exposed to rain, cold, heat, dust, handling or any other effects that might cause its deterioration. It should be made in a form such that it can be inserted in a pot, attached to a plant, fastened to a branch, planted in the ground or affixed to a rock surface. Each of these locations will require a different mounting interface. For a potted specimen it might be a vinyl stake; for an epiphytic plant it might be a plate



with a hole drilled to receive thin wire. These serve just as examples; we will get to the specifics later.

While remaining clear and non-fragile for many years, the mounted labels should be practical objects that are simple to create by the private collector. They should cost far less than the plant's value and they should be easily replaced in case of a name change. It should be possible to create them quickly.

There are many different types of labels that might match these requirements. We do not discuss all of them here, for there are too many. One is an enamel or vinyl surface that can be scribed with a soft, graphite pencil. These are quickly and easily made, last for years exposed to sun and rain but are gradually erased, especially when they are handled. Permanent marking pens do not create permanent markings; the sun makes them fade within a few years. India ink does last permanently on some surfaces but it does not meet the 'easy to use' requirement. Labels that involve applying mechanical pressure to make letters do last if they are made from metals that do not corrode but they are generally not very easy to read and require twisting toward the light to improve legibility. Aluminum tends to corrode if exposed to salty air in coastline areas. We will exclude labels made by photoengraving, not because they are not legible or long-lasting, but because they are relatively expensive.

The most satisfactory type of label we have tried for some years involves the use of TZ laminated tapes for the P-touch printer made by Brother. These have proven to be reliable, legible and durable in environments that are likely to be at least as tough as those that our plants are likely to endure. Our experience, limited to five years, indicates the clarity is fully maintained while other people growing plants, even in the intense sun of southern California, indicate they last almost twice as long without degradation. The labels will adhere to almost any firm surface.

While they allow us meet the specified requirements they are more expensive than those made using pencils, for instance, because they are printed by a device with a relatively high up-front cost. At time of writing a Brother label printer for these tapes costs between \$30 and \$80, depending on the choice of label design flexibility desired. The cost of tape is \$10 to \$15 for over 100 labels, or 10 to 15 cents per label. It is frequently possible to find prices 30% below the lower level by shopping on the Internet. Adding the cost of a vinyl stake, a few cents each, a round number for the total cost for 1000 mounted labels is unlikely to be much above \$100 plus the cost of the device, typically \$50 for one fully equipped, attachable to a computer or run portably. For many people, 1000 labels will be sufficient. For plant additions or species updates the incremental cost is low as the printer lasts for many times this number. The cost per plant is a small fraction of the value of a plant even in a non-specialist collection. This is excellent value for the collection, particularly when considering that the labels last, do not fade for many years and are not erased with handling or being subjected to sun or water. Moreover, the tape labels are

- More legible than most handwriting
- Available in multiple colors
- Available to match stake sizes
- Printable in multiple fonts, font sizes to accent genus, species, variety etc.

Some models of the label printers (such as the 'fully equipped' model referred to above) can be attached to a computer for ease of printing and integration with a database. Typing each label on the label printer can be quite rapid once one has become accustomed to using it. Making several identical labels at once can, of course, save time. Attaching the tape to the label mount can be the slowest part of the operation.

## Label mount materials

The most common materials used for label mounts ('stakes' if planted) include:

Styrene – a little cheaper but more likely to become brittle or turn yellow

Vinyl – quite cheap, lasts for many years if at least 0.2 inches (5 mm) thick

Steel – if enameled, it lasts 'forever'; drilling is a little more difficult

Aluminum – subject to corrosion in salty air; embossing helps

Vinyl mounts are available with holes pre-drilled to accept attaching wire. The steel material can be cut from roofing sheets. While it lasts far longer than you're likely to need, its edges will be sharp unless you file them. We exclude wood mounts unless you live in a very dry climate and find that they do not warp or bend for you.

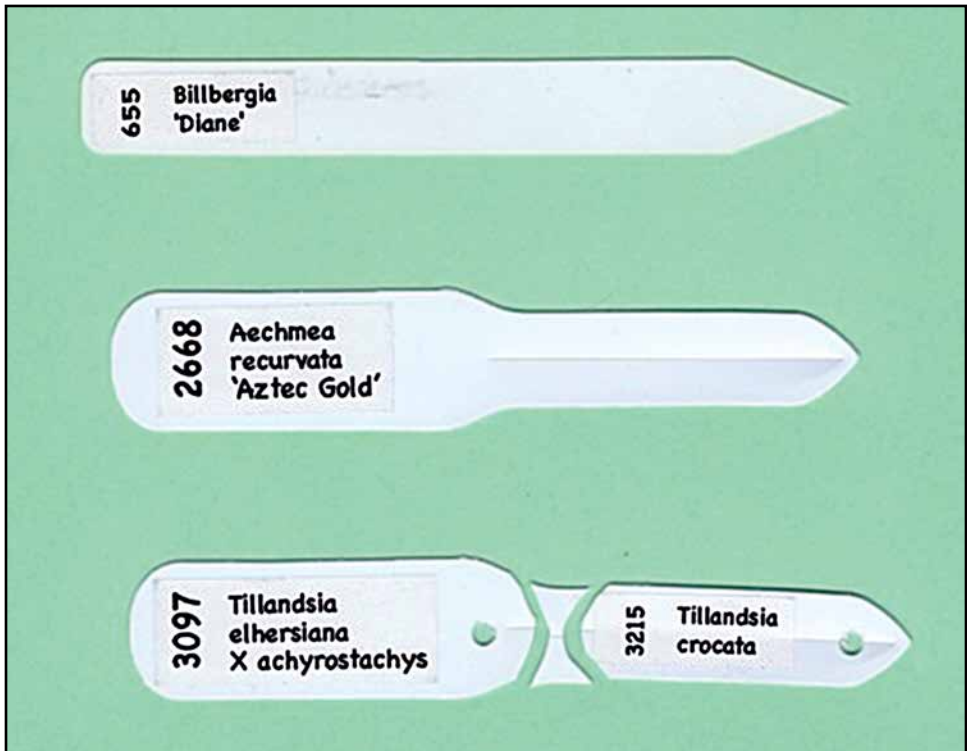


Figure 1. Examples of labels applied to vinyl mounts

Label mount shapes and sizes

In this section we describe label mount sizes and how labels look on them. For simplicity we illustrate only vinyl mounts but the labels can be applied to each of the materials listed above

In Figure 1 the top row mount will be referred to as a stake mount with a height H and a wdth W. The next row shows a plate stake mount with a plate width P. It may be used as plate stake mount for potted specimens or (third row) it may be cut and drilled to provide pendant mounts. The topmost mount will be referred to as a stake mount. The next row shows a plate stake mount which may be cut and drilled as pendant mounts (see third row).

Stake mounts for pots

H	W
3" (76 mm)	3/8" (9.6 mm)
4" (102 mm)	3/8" (9.6 mm)
5" (122 mm)	5/8" (16 mm)
6" (153 mm)	3/4" (19 mm)
7" (178 mm)	7/8" (21.4 mm)

Plate stake mounts for pots and terrestrials

P	H	W
4" (11 mm)	1.375"(4 mm)	1.25" (3.2 mm)
7.5" (19 mm)	2.5" (6.4 mm)	3.375" (9 mm)
9.5" (24 mm)	2.5" (6.4 mm)	3.375" (9 mm)

Pendant mounts can be cut from plate stake mounts to the dimensions desired. The adhesive labels can also be attached to front and back surfaces of all these mounts. This can be useful if, for instance, acquisition dates or accession numbers are too lengthy to print with the plant name. Figures 2 & 3 illustrate how these mounts and labels can be readable and attractive. For simplicity we show labels with only species names and accession numbers printed.

Fabricated from the same mount material here is a label planted in open ground (Figure 4). It is a simple matter to change the font and label size. For large, planted specimens the mounted label may be screwed into a more bulky post, made of preserved wood or even metal.

Labels can be used for private recognition, barely visible except to the owner, or they can be large and obvious to show visitors. The mounts can be simple vinyl ones, as described above or they can be metallic or even fashioned from stoneware. The





*Figure 2. Label for a potted specimen showing acquisition number and species*

tape labels will adhere to all surfaces that are rigid and smooth. Multicolored tape is available or, for a mount with a color that differs from that of the print, clear tape may be a better choice. Many options are available. Here is one for plant growing in a dead tree-stump.

For potted plants or for epiphytes growing attached to a branch, for instance, the vinyl mount is the simplest choice. Figure 5 shows a vinyl mount for a large plant growing inside a tree-stump almost twelve feet away from closest easy approach. The label size is larger so as to be readable.



Figure 3. Pendant label for an epiphytic species. Drilled hole size is not critical

For plants grown outdoors in the ground there are other choices available to avoid the untidy appearance of many vertical vinyl mounts among the plants. If the specimens are not closely spaced mosaic tiles pressed lightly into the ground form excellent mounts. These can be quite clear while not being obtrusive. Figure 6 shows one for a dry area bromeliad. The mount measures 2" x 4" (5cm x 10 cm).

In warmer areas such as Florida and southern California where *Aechmea*, *Neoregelia* or *Billbergia* clumps are often planted in beds the spacing may be less and label mounts attached to stakes driven into the ground provide more visibility, if that is desired. For longevity, a 12" (30 cm) section of half inch (1.25 cm) PVC electrical conduit serves this purpose well.





Figure 4. Label for a planted-out specimen of *Puya ferruginea*. The mount can be moved as the young plant develops

## Database management

Once you commit to the use of labels using a printer, as described above, it becomes a natural task for you to incorporate the label information into a database. This could be as simple as a list on paper or a spreadsheet or it could involve the use of a PC, Mac, iPad or other tablet with similar features. Several printers of the type described can be controlled directly from such a computer. Inserting the data at the time a label or set of labels is created facilitates the creation of the database. Using a computer to enter the printer data is done almost as rapidly as carefully inscribing the information on a tag. Once done, copies of the label are made quickly and easily. You can add information to the database entry, where and when you got the taxon, comments about it, its full botanical name, last time it was potted-on and so forth but not print it on the label. It depends just on your personal tastes and how you want to keep track of the plants.

Once created, you do have to take care of this information. If a plant is removed, split or introduced, a label must be removed, updated or added. It sounds like more work but if you have a collection of many species and varieties of bromeliads you should be noting these changes in any case. Use of the computer makes the job less tedious. You look forward to doing it and getting a better assessment of what you have.

We illustrate the process with an excerpt from a simple spreadsheet database:



Figure 5. Specimens such as this *Wittrockia* 'Leopardinum' require a wider label (3" across) and larger font. More specific information such as 'cv. *W. gigantea*' can be labelled on the rear. This mount is inserted in the organic debris of a tree stump in which the specimen grows

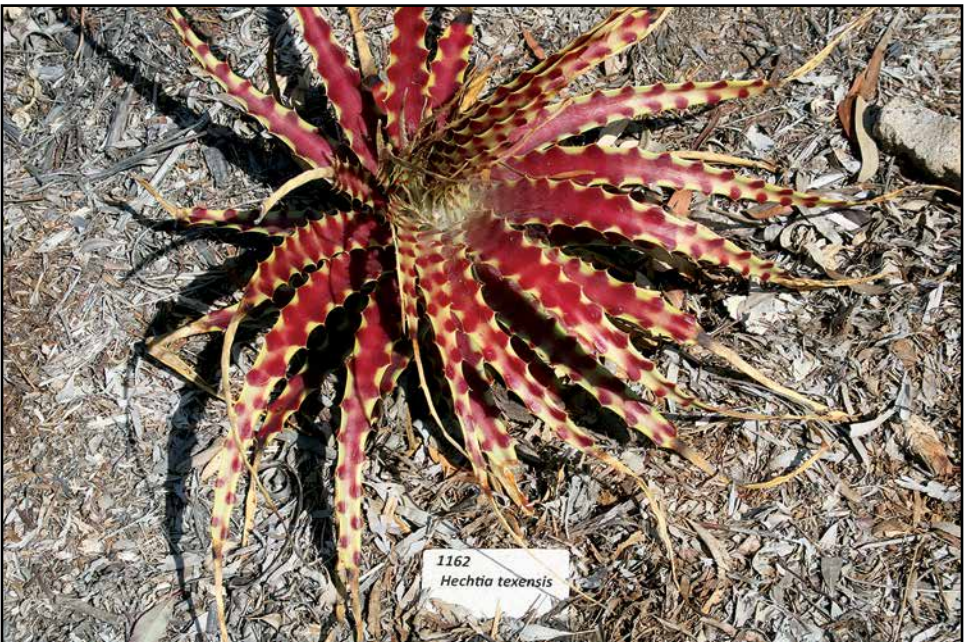


Figure 6. In open ground terrestrials such as this *Hechtia texensis* are clearly identified with a label attached to a stoneware or smooth marble mount that is partly buried to avoid disturbance



1019 61	<i>Tillandsia</i>	<i>aeranthos</i>	
1020 62	<i>Tillandsia</i>	<i>bergeri</i>	
1021 21	<i>Tillandsia</i>	<i>latifolia</i>	cv. Enano
1022 64	<i>Tillandsia</i>	<i>latifolia</i>	cv. divaricata
1023 65	<i>Tillandsia</i>	<i>fasciculata</i>	
1024 66	<i>Tillandsia</i>	<i>straminea</i>	
1025 67	<i>Tillandsia</i>	<i>ionantha</i>	
1026 68	<i>Tillandsia</i>	<i>bulbosa</i>	
1027 69	<i>Tillandsia</i>	<i>tectorum</i>	
1028 70	<i>Tillandsia</i>	<i>araujei</i>	
1029 71	<i>Tillandsia</i>	<i>albertiana x ixioides</i>	'Mystic Flame'
1030 72	<i>Tillandsia</i>	<i>streptocarpa</i>	giant form
1031 73	<i>Tillandsia</i>	<i>cardenasii</i>	
1032 80	<i>Tillandsia</i>	<i>brachycaulos x streptophylla</i>	'Eric Knobloch' (?)
1034 82	<i>Neoregelia</i>		'Granada'
1035 83	<i>Neoregelia</i>		'Blood Spots'
1036 85	<i>Aechmea</i>		'Black Panther'

The first column gives the Accession Number assigned to the plant. There is no need, if you have a computer, to assign them in any particular way. The list is easily sorted, by genus and species in this example. Typically, also, there would be a column for the date you got the plant, or created a new specimen. There might also be a column to show where you got the plant and others showing time of first bloom or comments about it.

Here is a second example, not one from a nursery or a museum, but for one of the authors (DK). First, we see a plant entry page:

Plants	Genera	Sources
ID 2259		
Group Bromeliads		
Genus Acanthostachys		
Specie pitcairnioides		
Cultivar		
DateCreated 3/10/2008		
DateLastChange 4/28/2010		
Date Acquired 3/10/2008		
Cost		
Source Bird Peddicord		
Notes Originally from Bill Baker (California Gardens) with name of Araecoccus		
InventoryDate		
InventoryAmount		
Inactive Date		
Inactive Notes		
get tag info		
"2259", "Acanthostachys", "pitcairnioides"		
Photo title Acanthostachys pitcairnioides [2259]		
culture notes growth habit		
Date	Note	



There will be many pages like this, thousands in larger collections. Next, we see a list of the plants sorted by 'Group'. In this collection Group refers to Aloe, Bamboo, Banana, Bromeliad, etc. The list has been created by sorting through all the plant entry pages. The plant entry above appears under 'Bromeliads', and its entry or tag number, genus, species and source, all of them defined on the Plant Entry page, show up on a page like this:

6/20/2012		Plants by Group		2
plantsGenus	plantsSpecies	plantsID	plantsSource	
rauhi		1614	Quail Gardens	
speciosa		2467	Mark Fanizza	
vanvalenii		1300	Quail Gardens	
variegata		2557	Joyce Brehm	
wickensii (hybrid ??)		1830	Solana Sculcents	
Bamboo				
Chusquea				
coronalis		791	Unknown	
Banana				
Musa				
acuminata x balbisiana cv. 'Giant'		2393	Encanto Farms - Jon Verlick	
'Misi Luki'		2180	James & Chandra	
'Sweetheart'		2407	California Rare Fruit Growers	
Musella				
lasiocarpa		1922	Tom Piergrossi	
Bromeliads				
Acanthostachys				
pitcairnioides		272	California Gardens (Bill Baker)	
pitcairnioides		2259	Bird Peddicord	
pitcairnioides		2805	Tropiflora	
strobilacea		143	Botanical Diversions (Lloyd Kiff)	
strobilacea		499	Grace Barnes	
strobilacea		2320	Seed Grown (by us)	
Aechmea				
apocalyptic		2138	George Allaria	
apocalyptic variegata		1360	North County Society	
'Ares'		1308	Keith Smith	
'Astral Traveler'		3484	Nick Bethmann	
angustifolia (Ecuador)		1269	Betty (Girko) Patterson	
'Aztec Gold' F2		2329		

Of course, we all have our own preferences. Someone with a collection of many years but without good documentation of where they came from may have to ignore the source data for existing plants and include it only for new entries. Another, perhaps an enthusiast of Neoregelias, may insert comments such as variegation and color changes with season or application of fertilizer for each of his named hybrids. A grower in an area that is occasionally subjected to heavy frost may be more interested in recording how many degrees led to damage for each entry. Another, preparing for a show a few months later, will find a database is valuable by providing the date of first blooming each year for each potential entry. Other listings (reports) are easily made to suit our particular uses.

## Summary

Integrating a permanent labeling system with a small computer-based database is both a practical and inexpensive option for bromeliad enthusiasts today. No special expertise needs to be acquired if one already has familiarity with the use of a small computer. The labeling system described is available and can be used 'straight out of the box'. Certainly, that was the case for one of the authors (AW). The complete cost per label printed on a vinyl mount is about \$0.15 at present time. If ceramic materials or stone are used with a 2" x 1" (5 cm x 2.5 cm) plate size, that cost may reach \$0.25 or so, depending on material used. There is no need to imprint all of the data for a plant on the label as it can be accessed immediately from the database.

With mobile computer in hand it is a satisfying experience to walk around a data-based collection, checking on the status of the plants and possibly updating comments for some entries. Once you can do that you have reached the goal of keeping track of your bromeliads.

### BSI JUDGES SCHOOL I AT THE 2012 WORLD CONFERENCE

School I for World Conference Judges School series will be held on Tuesday, September 25, in Orlando, Florida. There are six schools in the series and are held at each conference. The last series finished in New Orleans, therefore it starts over with School I in Orlando.

If anyone is interested in attending, they should contact Betty Ann Prevatt, Judges Certification Committee Chairman, before September 1st.

Contact below:

Email: [bprevattpcc@aol.com](mailto:bprevattpcc@aol.com)

Telephone: 239-334-0242

Address: 2902 Second Street, Fort Myers, Florida 33916, USA.

The school is all day and the cost is \$25.00.

## *Aechmea chantinii*, Yesterday, Today & Tomorrow

Nat DeLeon

I've never had any schooling in either botany or taxonomy, but I have grown tropical plants for more than 60 years in the Miami, Florida area. I also have a curious mind regarding the plants I grow. I went from my first love, palms, to bromeliads, and we have had a long association.

For some time now my favorite bromeliad group is *Aechmea chantinii*, and, if anything, it has intensified.

Does anyone have all the cultivars of *Ae. chantinii*? I doubt it. Don Beadle's book, "The Bromeliad Cultivar Registry," June 1998, a classic, lists some 34 cultivars. I'm sure that some of the names are duplicate with most of the cultivars being made from Florida west to California, and from many other areas in the United States, Europe, Asia and South America. *Ae. chantinii* has also been extensively hybridized. No other bromeliad that I know of has as many cultivars. And now I will stick my neck out and let the splitters and lumpers be damned, and say that *Ae. chantinii* is a species that acts like a hybrid. I have read everything I could read including the BSI Journal (an excellent source of information) going back to almost the very beginning. Since I'm retired now, every so often I read old issues of the Journal and the tip off came when I was reading an article in one of those issues (Vol. 1, No. 3, 1951) by Charles Chevalier, a curator of the great botanical gardens of the University of Liege, Belgium in which he wrote, "One curious discovery was that the *Ae. chantinii*, from which no results had been obtainable by auto-fecundation [self-pollination], gave when fecundated by *Ae. fulgens* discolor, a whole series of really remarkable plants. These had leaves of every shade from olive green to reddish brown, and thickly flowering cupitula [heads] well separated above the foliage, presenting a whole gamut of warm bright colors, from canary yellow, through orange and salmon pink to coral red." Primary crosses between species of each other just don't do that. There is very little difference between the progeny.

Yet *Ae. chantinii* continues to be cross pollinated with each other, and as long as this happens there will continue to be new cultivars.

The first *Ae. chantinii* was introduced by M. Baraguin from Brazil in 1877 into France. It was first described by Baker in 1889.

All attempts to self-pollinate it failed and so it could only be propagated by division of the suckers. As a result, it continued to be very rare and grown mostly by European botanical gardens. Many years ago, through a series of seed and plant trades, I finally obtained an off-set which still grows in my large oak tree in my front yard. The plant is of medium size and continues to grow smaller in size than most forms.

In Vol. XXV, 1975, No. 3, Victoria Padilla wrote, "So far as it can be determined, no more specimens of this plant were collected because the location of its habitat was forgotten. Collectors who went to Peru tried to collect at higher elevations rather than along the hot, humid Amazon." Padilla continued, "For years the only plants that were available to collectors were the suckers produced from these first few imports. For some strange reason, the first plants were evidently sterile and not capable of producing seed."

Then in 1960, some 83 years after its first introduction, a collector named Lee Moore of Miami, Florida, found it growing along parts of the upper Amazon in Peru. Lee wrote, "*Ae. chantinii* is one that caused quite a lot of controversy among the experts because of the



Figure 1. *Aechmea chantinii* 'Pink Goddess'. Photo from July 1961. One of the original plants from Holmes' collections in Peru that were put up for sale. Notes on the back of the print read "One of 57 plants in bloom. We would sell as fast as they bloomed. Our collection was very outstanding. We had very good sales." The very stiff, narrow leaves are characteristic of this cultivar.



Figure 2. *Aechmea chantinii* 'Harlequin' A dark-leaved seedling that arose in a crop grown by Gary Hendrix in the 1970's. All other seedlings in the crop had the green leaves that were typical for the clones grown at that time.

wide variation of its clones. Each small tributary had a different clone of this plant. Before I found these plants in the jungle, there had been only one clone that was known to the world. But now I have found at least eight definite clones of this species."

Moore sent a number of plants to the nurseryman, Mr. Jack Holmes of Tampa, Florida, who grew mostly orchids. Victoria Padilla wrote, "He would not be satisfied until he himself went to Iquitos, Peru, and with the assistance of Lee Moore collected hundreds of this *Aechmea* for his establishment. The plants he brought back came in a variety of shapes, sizes and colors. Most of them were much larger than those grown in Europe but unfortunately lacking the graceful form and clear-cut banding of the early imports [from Brazil]. Whereas the cultivated European types measured 10 - 12 inches both ways, these new plants grew as tall as 2 1/2 feet and almost as wide. There was a very wide variation in the banding and shape within these new jungle species. Some had gray foliage and silver banding with a pink inflorescence; others were definitely tubular in shape, some had dark red to almost black leaves with silver banding. Some had no banding at all."

Padilla continued, "Jack Holmes finally had enough plants to experiment with them to see if he could get them to set seed. After a round-the-clock vigil he discovered that by pollinating the plants in the early hours before dawn, he was better able to secure seed and so provide enough plants of *Ae. chantinii* to meet the great demand for this plant." "What has bothered this writer [Victoria Padilla] for many years is why it took so long for plants men to rediscover this bromeliad. In 1964 she went to Iquitos herself (see Vol. XV, No. 2, 1964) to see these plants growing in their homeland. In and around Iquitos she saw them growing everywhere, even growing on fences in the town itself. They were so common as to be considered weeds." It would be interesting for someone to try their hand at pollinating





Figure 3. *Aechmea chantinii* 'Shogun'. An albomarginated sport that arose during the early days of tissue culture production in Japan (early 1980's). Demand for this cultivar still exceeds the supply.



Figure 4. *Aechmea chantinii* 'DeLeon'. A more recent cultivar from Nat DeLeon. This plant started showing up in auctions during the early 2000's. It is currently one of the most highly sought after cultivars.

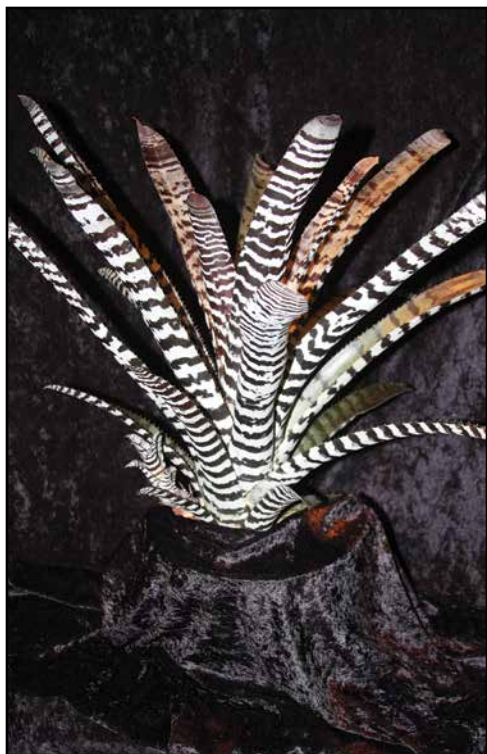


Figure 5. *Aechmea chantinii* 'Chocolate and Vanilla'. A new cultivar from Nat DeLeon. This was first exhibited in 2010 and very few plants have made it into collector's hands yet.

not. So far the floral bract colors range from orange to shades of red and pink. Bob Spivey collected a plant in Ecuador whose bracts were pure yellow and of course the plant itself took the color and form of its own.

Out of curiosity, I took out my World Atlas to see for myself where *Ae. chantinii* had been collected. Try it sometime and see how little collecting has been done over such a great area. Maybe Victoria Padilla was right when she wrote that collectors prefer the cooler, higher elevations over the very hot sea level locations. So far it has been found in all of the countries that extend into the Amazon. The largest area, Brazil, only has one collection that I know of. Oddly it was the first site known.

*Ae. chantinii* belongs in the subfamily Platyaechmea and probably the best treatment of the group is to be found in Volume 1 'The Flora of Ecuador' by Prof. Jose Manzanares who braved the hot lowland Amazonian area of his country. He describes species and several varieties, including what are natural hybrids. Considering that the Platyaechmea are so varied in every way, both in plant size and character, inflorescence size and color, etc., it becomes difficult to know where one species starts and the other ends. As a result, scholars are not always in agreement. Given the variation of the family in all of its parts, some scholars lump some of the species together, arguing that they should be treated as forms of said species. The odds are that as more collections are made from the Amazon, then perhaps there will be a better understanding of the group.

*Ae. chantinii* in this manner and see if it really works. I would myself but I am handicapped in having my left arm rendered useless with a bout of Shingles.

Then in 1977, Shirley and Jack Grubb of River Ridge, Louisiana, went to Iquitos to collect *Ae. chantinii* and couldn't find a single plant, although they collected other bromeliads. Apparently local vendors and others had stripped them clean. Iquitos is by the head waters of the Amazon River. That area feeds a big business of fish, snakes and animals and connects with the city of Leticia, located on the upper Amazon River itself. From there seaplanes pick up the works and fly them to many parts of the world. I remember one pilot in particular who used to fly in plants, etc. into Miami. He knew about *Ae. chantinii*, but brought in other plants as well. I got to know him and would identify and buy plants. I knew his flight schedule and would meet him near the airport. In the meantime, Jack Holmes also cross-pollinated many of the plants Lee Moore sold him, and eventually most of the plants he was selling were hybrid crossings and they sold just as well.

It was remarkable how varied the plants were, whether they were field collected or

Uncle Derek says, “An impossible task for bromeliad growers is to TRY and identify all of the cultivars of *Ae. chantinii*.” That will never happen. As long as people continue to cross two *chantinii*s acting as a hybrid, it will continue to make new cultivars. The other problem is that each grower who hybridizes, myself included, thinks that the results of his or her pollinating efforts bear unique results. Most, including myself, never register their results, and so we have a situation that will only get worse. The problem, as I see it, is that the plant is too ornamental and we think that by hybridizing it we can improve it or come up with something special, but special is only in the eye of the beholder. Several years ago, I visited a grower who grew a lot of *chantinii*s. Before I left, she brought over one of these plants and asked what I thought of it. I didn’t want to embarrass her even though I thought the plant was very plain. She then asked me to take a closer look at the plant. It was then that I saw that the leaf edges had no spines, they were as smooth as a baby’s skin.

This spineless plant may have been the most important sight I had ever seen in bromeliads. She was way ahead of me and knew what I was thinking. While the plant itself was unattractive, it had to be hybridized with other *chantinii*s to see if she could get a spineless plant with attractive foliage. She knew that the work ahead had no guarantees. I asked her to let me know when the plant was beginning to flower and if I had any cultivars coming or in bloom, she was welcome to use them. Less than a year later, I got the call. She hybridized as many plants as she could which produced a lot of seed. About nine months later, I visited her again. In one area she had some 50 plants, all spineless. All had good foliage of different patterns and colors. What a remarkable sight! During 60 years of growing bromeliads, the sight of those spineless plants will always be remembered. She knew that there was a lot of work ahead. I suggested she choose four or five of what she thought the best and propagate them, probably by putting them into tissue culture. She had one shot at making a killing, money-wise. Once she began selling them, other people would put them into tissue culture and the plant’s value would be reduced.

Believe me, the plants will be priceless. And think, no more digging spines out of your arms or going for a blood transfusion! How long will it take for the plants to be released? Who knows? But the event will be well worth the wait!



Figure 6. *Aechmea chantinii*, a group of ‘spineless’ seedlings. All plants have leaves with greatly reduced numbers of marginal spines and a few could actually be called spineless. Note the wide variety in leaf banding patterns. Under development for future release.



## William (Bill) Morris - 50 Years As Trustee To The BSI

*Compiled by Peter Tristram*



Figure 1. Bill Morris

This year, Bill celebrates 50 years as an honorary trustee to the BSI, a wonderful and unique achievement - he was elected way back in 1962! The full list of trustees, past and present, can be viewed on the BSI website at [http://www.bsi.org/bsi\\_info/](http://www.bsi.org/bsi_info/)

In 2007, Bill was featured in the journal, in an article (March-April, 2007 issue, pp.92, 93) by Geoff Lawn, the current BSI Cultivar Registrar, for his lifelong association with the bromeliad world. This coincided with his 50 years of membership of the BSI. Much detail about Bill's bromeliad history and achievements are outlined there: his first bromeliad obtained in 1953, his years of international contact and seed-raising, his hybridising years and his long association with many societies.

The following article, written by Ross Little, is largely based on a talk given by Bill at the Australian Bromeliad Conference in 1983. Ross is formerly of the Hunter Valley region of NSW to the north of Sydney, where Bill spent much of his life. The article has just been published in the recently-formed Far North Coast Bromeliad Study Group in subtropical Northern NSW, Australia, as that group's acknowledgement of Bill's unique achievement as a trustee.

*Bill first began collecting Bromeliads in the early 1950s, his first plants being four Billbergias and an Aechmea recurvata. Bill found it difficult obtaining plants and finding other interested people. Bills father was in the U.S.A in the early 1950s and was able to make further contacts for him.*



Figure 2. Bill Morris



*Dr Lyman Smith directed Bill to the BSI, which he joined and from where he was able to contact other growers in the U.S.A. and Australia. In those early days he obtained plants in Australia from Charles Hodgson who was the first Australian to be made a Trustee to The Bromeliad Society, he also obtained plants from Charlie Webb who grew from seed and also imported plants.*

*In 1962 Bill was inducted into The Bromeliad Society as an Australian Trustee. This same year, Bill and 35 other interested growers in Australia got together for a meeting at the Terrey Hills home of Mr And Mrs Duncan and at this meeting the decision was made to form a Society. The following year, 1963 saw the formation of what is now known as The Bromeliad Society of Australia Inc, having its first general meeting on the 6th of July 1963 at the YMCA in Pitt Street Sydney with 45 in attendance. Bill became one of the two Vice Presidents.*

*Bill offers a debt of gratitude to overseas growers who sent him and many others in Australia, seed of many species and the occasional hybrid. These include Mulford Foster, Julian Nally - Florida, David Barry -- California, Charles Lancaster -- Costa Rica and Adda Abendroth -Brazil. There are probably many others, but these, particularly Adda, supplied seed of an estimated over 200 species of Bromeliads for cultivation in Australia. Seed was also purchased from commercial suppliers in both Brazil and Germany.*

*Bill has been responsible for the creation of many hybrids in several genera, mostly in Neoregelia and Billbergia. He grew many plants from introduced seed, including one of note which was out of seed batch received from Adda Abendroth of Neoregelia concentrica. From this seed batch Bill got an albomarginated plant now known as Neoregelia 'Bill Morris'.*

At the time of going to print we have been trying to track down others who have reached the 50 year milestone of membership and we have only confirmed 3 others, all trustees: the sprightly New Yorker, Herb Plevier who joined in 1961; Nat DeLeon, one of the pioneers in US bromeliad horticulture, whose membership dates from 1956, not that long after the BSI was formed in 1950 and Elmer Lorenz of California who has only just been contacted.

Congratulations on to these 50 years plus members! (Articles coming soon.)

Without a doubt, 50 years of BSI membership is a wonderful milestone of achievement. It shows dedication to the cause and is something that should not go unrewarded. Moves *are* afoot, amid the hallowed ranks of the BSI directors, to recognise such dedication in a fitting and more permanent manner. It is intended to celebrate every 'golden jubilee', both in the journal and at the biennial World Bromeliad Conferences.

It is never too late to be acknowledged. We would like this to be a regular happening but early membership details may not be in 'official' records. So if you joined the BSI (then Bromeliad Society Incorporated) before 1962 please contact us. If you joined in 1962 to 1968 also let us know so we can put you on the pending list. We don't want to miss anybody.



Figure 3. Bill Morris with *Neoregelia* 'Bill Morris'

*Bromelia 'Que Sera'*

*Derek Butcher*



Figure 1. *Bromelia 'Que Sera'*, photo Michael Kiehl





Figure 2. *Bromelia* 'Que Sera' Flower, photo Michael Kiehl

"Que Sera, Sera", first published in 1956 is a popular song which was written by the Jay Livingston and Ray Evans song writing team. It means 'Whatever will be, will be' and part of this name is surely apt for this variegated *Bromelia*.

This article was prompted by the publication of *Bromelia* 'Aurelia' in J Brom Soc 61(4): 196-7. 2011 where the linked species is in doubt too, only our problem goes back 85 years!

Let us look at Brom Soc Bull. 5(4): 61. 1955 where Mulford B. Foster described a new variety in the genus *Bromelia* as follows:

*Bromelia serra* var. *variegata* M. B. Foster var. nov.

A var. *variegata* foliis albo irrideque longitudinaliter striatis differt.

Cultivated in Orlando, Florida since 1927. M. B. Foster No. 2892 (Type in U. S. Nat'l Herbarium)

This new variety of *Bromelia serra* was first seen in the Dommerich Estate at Winter Park, Florida. The plant was not labelled and no one knew its name or origin. The writer procured these plants and has grown them since 1927.

It has the most striking foliage of any of the species of the genus *Bromelia* and can withstand extreme neglect in the xerophytic garden. When the flowers are pollinated it will later produce its orange colored fruits but several unsuccessful attempts I have made to propagate it from seeds have been in vain. All of the seeds upon germination have appeared as pure albinos and have soon sloughed off from



Figure 3. *Bromelia* 'Que Sera', photo Michael Kiehl

the lack of chlorophyll. Thus all propagation has been made only by stoloniferous offshoots."

This was subsequently reduced to a form as follows:

*Bromelia serra* forma *variegata* (M. B. Foster) M. B. Foster ex L. B. Smith, *Phytologia* 15: 171. 1967.

Current thinking by most botanists is that you must have 'populations' to even warrant forma status and clearly this variegation is not transmitted by seed so how do you create a population?

We now move to Some Cultivated Bromelias: Thorny Problems by Harry E. Luther in *J. Brom. Soc.* 45: 261. 1995 where we read:

"Another rather commonly grown bromelia is *B. serra* Grisebach and especially forma *variegata* (M.B. Foster) M.B. Foster ex L.B. Smith (figure 10). The picture shows a standard, green leaf *B. serra*, but the variegated plant (figure 11) represents another species, *B. pinguin* Linnaeus!

Does a real variegated *Bromelia serra* exist? I suspect that the form name was attached to the wrong species epithet."



Taxonomically we still have *Bromelia serra* forma *variegata* but no *Bromelia pinguin* forma *variegata* as it has never been described and published as such. So what does a grower of this plant call it? Until now, Michael Kiehl of Michael's Bromeliads sold this plant as a variegated *B. serra* and there was nothing to say he was not correct. This plant needs a proper name and what better than *Bromelia* 'Que Sera'



Figure 4. *Bromelia* 'Que Sera' inflorescence, photo Geoff Lawn



Figure 5. *Bromelia* 'Que Sera', photo Michael Kiehl

## *Aechmea* 'Pagoda'

Geoff Lawn, BSI Cultivar Registrar

Abnormal vegetative sports are fairly common during the process of tissue-culturing plants in volume, either in the initial ex-plant division culture or subsequent replication in vitro. Often such propagules are deemed to be of no commercial value and are rejected in the goal for perfect copies of the original parental clone.

Such was the "offspring" from a normal-looking hybrid in 2001 which the breeder Chester Skotak of Dura Flor nursery in Costa Rica had sent to the tissue culture laboratories of Deroose Plants in Belgium. The parentage was:

Seed Parent: [*Aechmea fasciata* "Saquarema" x (*Aechmea flavorosea* x *Ae. fasciata* "spineless")]

Pollen Parent: [*Aechmea fasciata* "Teresopolis" x (*Ae. fasciata* "red foliage" x *Ae. fasciata* "spineless")]

The *Ae. fasciata* forms "Saquarema" and "Teresopolis" are after location names in Rio de Janeiro State, Brazil. After further evaluation, this complex cross was considered by Deroose Plants to have no commercial value, so it was no longer grown nor named. However, one early discarded sport from the batch was received by Chester Skotak to grow on for fun as a curiosity. Over several years this mutated cultivar developed distinctive characteristics and proved to be stable. The rosette growth was drastically miniaturized compared to *Ae. fasciata*, developed a solid elongated stem with upturned leaf tips and multiplied easily but never showed any signs of blooming.

By 2009 Central Florida grower Eloise Beach had acquired the stock of this yet-unnamed culton and not surprisingly found its optimal growing conditions do parallel those of a well-grown *Ae. fasciata*. Early batches were grown lushly to increase stock numbers quickly (Figure 1). Slow-release feeding speeds up the growth and makes a more robust plant but an improper balance of fertiliser to the amount of light will cause the rosette to lose its appealing compact form and bronze/red foliage reverse color. Fertilizing can be done using balanced slow-release formulations (sparingly), by foliar feeding or by a combination of both. Ideally, the compact rosette diameter is 8-10cms. with leaf width 2.5cms (Figure 2) in Eloise's light intensity conditions of approx. 2400 foot-candles (25,824 lux). Over-fed and / or over-shaded specimens would have extended floppy leaves with reduced redness and lack compact conformation.

In time the rosette develops an extended trunk up to 2cms. thick and 30cms. tall (Figure 3). The distinctive, upturned whorls of leaves may stack vertically or often corkscrew around the central stem. This growth pattern suggests a Chinese pagoda roof profile, hence Eloise registered its name as *Aechmea* 'Pagoda'. When the rosette "matures" the high central growing point seems to stop growing, but does not initiate flowering nor abort, but rather channels its energy into producing more pups. To date there have been no reports of *Ae.* 'Pagoda' reverting to more "normal" type growth.

*Aechmea* 'Pagoda', which is completely spineless, is a prolific pupper and easily forms a clump. The parent plant initiates offsets either at its base or higher up the stem, as well as in leaf axils, sometimes simultaneously. Even pups can develop their own pups. Basal



Figure 1. *Aechmea* 'Pagoda' , Greenhouse Group. Photo by Eloise Beach



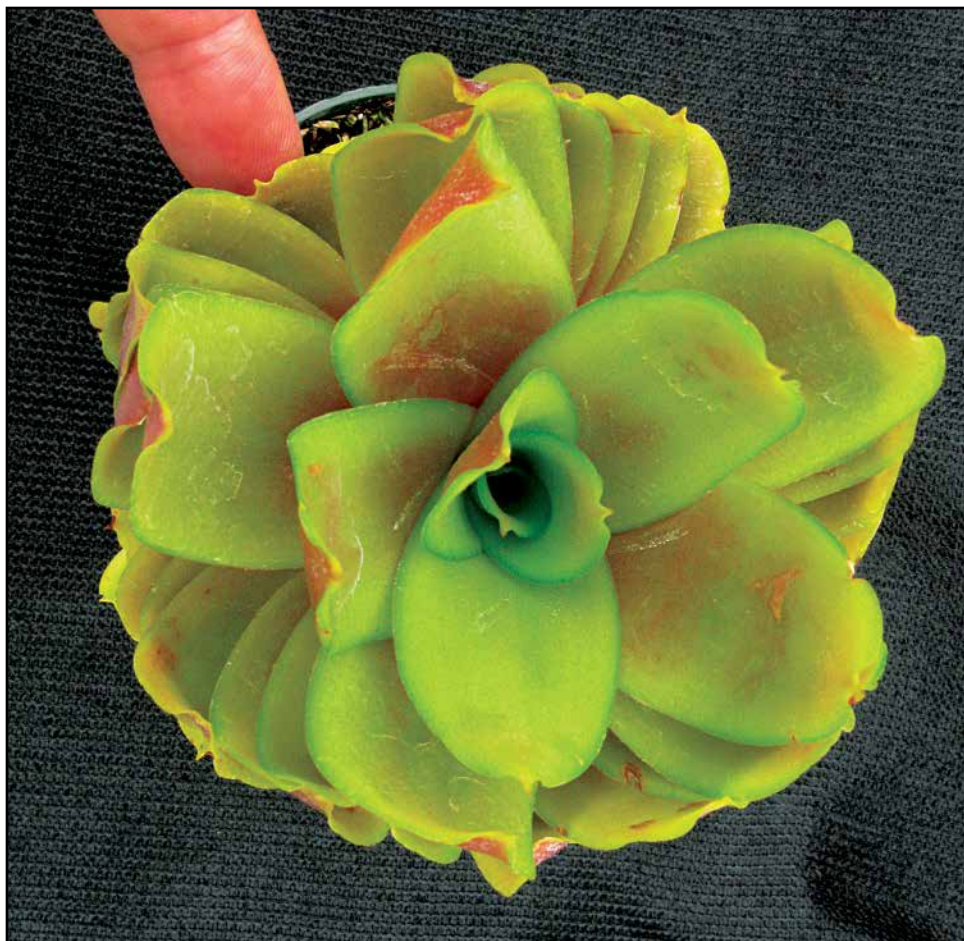


Figure 2. *Aechmea* 'Pagoda', top view. Photo by Eloise Beach

pups often root into the growing mix and seem to feed extra, resulting in their being mostly green. However, if the fertiliser/light factors are balanced, the red, compact leaves should develop. Offsets higher up the parent's stem tend to have red leaves and tighter conformation. Bare stems occur when dead or damaged leaves are removed, but this is no problem for the health and continued growth of the plant. A healthy root system can support this column of leaves, so staking is unnecessary and besides, most show rules ban stakes on competitive entries. Eventually of course the parent rosette dies as with most bromeliads.

In the U.S.A. this oddity *Ae.* 'Pagoda' was released in July, 2010 firstly at the World Bromeliad Conference in New Orleans. Its strange growth habit and other-worldly appearance could be best described as "weirdly wonderful".

Acknowledgement: Many thanks to Eloise Beach and Chester Skotak for information, advice and photos.





Figure 3. *Aechmea* 'Pagoda', 3 pots. Photo by Eloise Beach

## Mini and Midi Neoregelias

Geoff Lawn, BSI Cultivar Registrar



Figure 1. *Neoregelia* 'Altura', photo by Andrew Devonshire

Miniature *Neoregelias* have been in cultivation for decades, with such species as *N. abendrothae*, *ampullacea*, *azevedoi*, *chlorosticta*, *cyanea*, 'Fireball', *gavionensis*, *guttata*, *lilliputiana*, *olens* 'Marie', *pauciflora*, *pendula* var. *brevifolia*, *rubrifolia*, *smithii*, *tigrina*, *tristis* and *wilsoniana* prevalent in collections. In particular there are over 40 different clones of *N. ampullacea* grown, although some are probably hybrids and also there is not the elusive *N. punctatissima* which breeders claim in their hybrids' parentage.

Basically there are 2 types of minis, which for competitive show entries arbitrarily are defined as being no more than 20cms. diameter by 15cms. tall. Of course excessive shade and / or feeding can cause the specimen concerned to exceed these size limits. There is the archetypical *N. ampullacea*, with a dwarf, tubular rosette of 7-15 leaves, which is an upright ampoule in fact, plus it's usually stoloniferous. The other type displays a flattish, fuller rosette (in bloom) of outspreading, layered leaves (10-20), exemplified by *N. smithii*, which is more clustered in growth habit.

There has been a breeding trend, moreso since the 1970's, within this miniature group, to duplicate the same characteristics as in medium to large *Neoregelias*. Maximum foliage colour and markings, broader leaves and even cup colour are





Figure 2. *Neoregelia* 'Ed Prince', photo by Eloise Beach

the goals in hybridising here. Two recent registrations highlight these desired qualities.

*Neoregelia* 'Altura' (Figure 1.), bred in 2008 by Auckland, New Zealand grower Andrew Devonshire, is a dwarf at 13cms. diameter by 13cms. high. The name "Altura" is an arabica coffee brand which in Spanish means "highest". In strong light the foliage base colour is lime green overlaid with bright tangerine/ brick red splashes and indefinite crossbands, both on the obverse and reverse. The rosette pups on 5cms. stolons. Seed parent is 'Wee Willy' = probably a 'Punctate Red' cross (by Grace Goode). Pollen parent is 'Blushing Tiger' = 'Perfecta' x 'Marnier-Lapostolle'F2 (hybridist Lisa Vinzant), wherein lies the zonated genes *N.* 'Altura' shows.

*Neoregelia* 'Ed Prince' (Figure 2.), bred in 2002 by Costa Rican hybridist Chester Skotak, was named to honour the long-time bromeliad enthusiast Ed Prince of Miami, Florida, the late husband of Moyna Prince. In bright light it's a squat mini to 20cms. diameter and 15cms. tall, with 3cms. wide leaves. The foliage is solid burgundy red with sepi red cross-bands, reflecting its parentage of *N.* 'Punctate



Figure 3. *Neoregelia* 'Totara Treasure', photo by Peter Coyle

Red' x 'Hannibal Lector', which are both ancestors with lineage back to select forms of *N. ampullacea*.

Midi Neoregelias refer to those with mid-range rosette diameter (20-45cms.) Attractive species within this group include *N. burle-marxii* ssp. *meeana*, *carolinae*, *camorimiana*, *fluminensis*, *marmorata*, *kautskyi*, *nivea*, *rubrovittata*, *sarmentosa*, *spectabilis* and *zonata*. Often cultivars are bred by crossing miniatures with large parents (over 50cms. diameter). Just two registered midis are featured here, where the focus is clearly on foliage colour and markings, as well as rosette conformation.

*Neoregelia* 'Totara Treasure'(Figure 3.), was bred in 2007 by New Zealander Peter Coyle of Totara Waters Gardens in Auckland. This midi is 30cms. diameter by 13cms. high. The seed parent is *N. 'Lambert's Pride'* (parentage unknown) and the pollen parent is *N. Treasure Chest* ('Pink Sensation' x 'Royal Burgundy'--bred by Grant Groves). The lovely result is a broad-leaved rosette in cerise pink and lime green tartan mosaic.

*Neoregelia* 'Wisteria' (Figure 4.) is at the top end for midi size of 45cms. diameter



at maturity. Bred by Hawaiian hybridist Lisa Vinzant, the seed parent is *N. 'Spring Rain'* (*correia-araujoi* x *burle-marxii*) and the pollen parent is 'Faded Love' [(*'Granada'* x *pauciflora*) x *burle-marxii*]. The strikingly-different lavender purple/cream foliage splashes and spotting are inherited from both parents' ancestors.

For many growers this love affair with Neoregelias will continue whilst breeders keep producing newer and different combinations. Minis have always been popular for small spaces, generally are hardy, adaptable and very effective when colonized in hanging baskets or mounted on trees. Midis have their prized place more so as potted specimens on benches and also as landscape features. It is a combination of genetics, good culture (especially bright to strong light and restricted feeding), position, season and climate which show off these mini and midi beauties to their full potential.

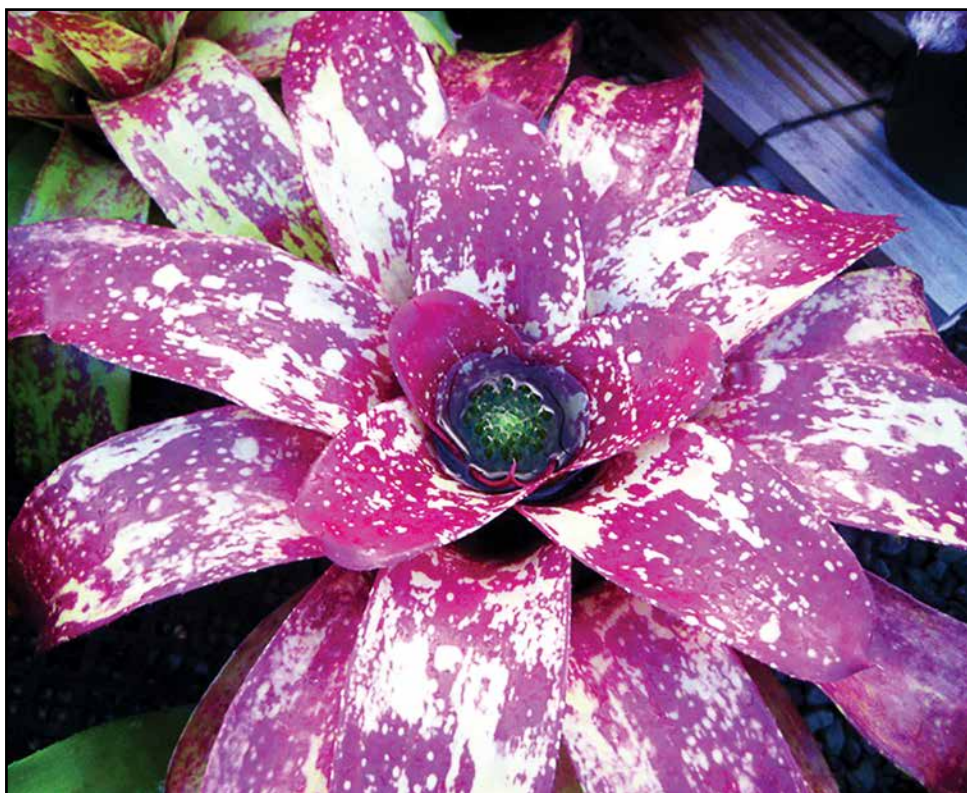


Figure 4. *Neoregelia* 'Wisteria', photo by Lisa Vinzant

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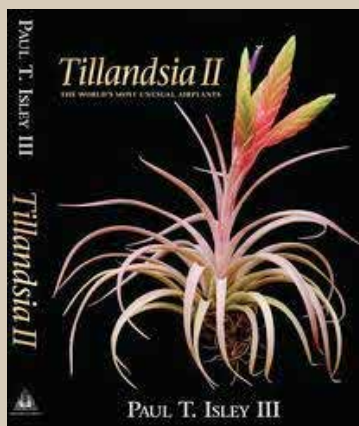
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*Tillandsia* ‘Samantha’

Geoff Lawn, BSI Cultivar Registrar &amp;

Pamela Koide-Hyatt, Bird Rock Tropicals



Figure 1. *Tillandsia* ‘Samantha’ grex, photo by Pamela Koide-Hyatt

Recently BSI member Don Billington of Liverpool, England requested some background information about his *Tillandsia* ‘Samantha’, which he intended to enter into the world-famous, imminent Chelsea Flower Show 2012 in London. This cultivar name was not in the BCR and after several enquiries drew a blank, I googled the name online. At least 5 European-based websites featured this tillandsia with photos and some details about its commercial release, distribution, parentage and breeding.

These facts lead to the breeder Pamela Koide-Hyatt of Bird Rock Tropicals nursery, in Encinitas, California, who tells her story from here.

“This cultivar is a cross of 2 species which I collected in western Mexico in the early 1980’s. The pollen parent is *T. kalmbacheri* from the State of Michoacan. The seed parent is *T. mooreana* from the State of Jalisco. I made the cross in 1989 and harvested the seeds in August, 1991. The progeny show intermediate characteristics of the parents.

This pollen parent *T. kalmbacheri* (Michoacan form) is not a very large plant, compared to the form from Oaxaca. The Oaxacan form in bloom stands 4-6 feet tall (120-180cms.) with a very elongated inflorescence, plus a rosette diameter of



Figure 2. *Tillandsia* 'Samantha' at Deroose Plants Collection house, Belgium

over 3 feet (1 metre). This smaller Michoacan form has a more digitate inflorescence and when blooming is closer to 2 feet (60cms.) high. Flower petals of both forms are light yellow. The primary bracts blush pink and spikes are full and pale green. The foliage is grey-green and lepidote.

The seed parent, *T. mooreana* (Jalisco) has very dark green, shiny foliage. The leaf texture is thin and the rosette leaves curl back towards the base of the plant. Near anthesis, the foliage changes to pink and red. The inflorescence is tall, blooming up to 4 feet (120cms.). Primary bracts can show some pink or red, but will fade back to green. The bracts are not as wide as those of *T. kalmbacheri*. The *T. mooreana* has many more lateral spike branches and purple flower petals.

It took me over 10 years to grow these progeny to blooming size, which occurs in Spring/Summer (Figure 1). The foliage is wide like *T. kalmbacheri* but glossy, dark green like *T. mooreana*. The inflorescence spikes and primary bracts are like *T. kalmbacheri*, but there are more of them and much taller, similar to *T. mooreana*. It is really the best of both parents. Like so many of my primary *Tillandsia* hybrids, this cultivar is intermediate between the 2 species. Of the plants that I bloomed, several showed some pink in the foliage, but that depended on controlling the feeding and providing sufficient light. The spikes hold color for a long time, more than 6 months. The flower petals are pale yellow.

In December, 2003 Reginald Deroose, from Deroose Plants in Belgium acquired a plant from me. He was successful in tissue-culturing the clone en masse (Figure 2) and introduced it to commercial growers in 2010, with the first batches released retail in January, 2011. The primary market at this time is Europe, but some have been sold in the U.S.A. and China. Grex siblings I retained at Bird Rock Tropicals are virtually identical to the Samantha clone, although the primary bracts of several clones may be a brighter pink under my strong light in southern California. Buyers should note that plants sold under my stock number "TX196 *T. mooreana*(Jal) x *kalmbacheri* (Mich)" should now be labelled the registered name of *T. 'Samantha'*. "

The chosen name of Samantha honours the daughter of one of the leading European distributors. The good news is that Don Billington's 2012 RHS Chelsea Flower Show display entry of bromeliads, size 4 metres x 4 metres which included





Figure 3. *Tillandsia* 'Samantha' Chelsea Flower Show 2012, bromeliad display entry, Photo Don Billington

a group of 5 *Tillandsia* 'Samantha', went on to win a Gold Medal for his 'Every Picture Tells a Story' Nursery at their first attempt (Figure 3).

*Tillandsia* 'Samantha' was entered also into competition for the Chelsea Flower Show 'Plant of the Year' 2012 (Figure 4). This new category was created in 2009 and is only eligible to plants which have not been seen at a flower show before. The Royal Horticultural Society Committee chooses a short list of twenty finalists, which this year included *Tillandsia* 'Samantha'. The finalists are presented to the members of the R.H.S. specialist plant committees by the nursery or breeder who is introducing the plant. There is a committee vote and the 'Plant of the Year' is declared. Word spreads quickly around the world and as with both present and past winners, success inspires a dramatic boost in sales, also even among plants which do not win.

*Tillandsia* 'Samantha' was displayed with the other nineteen finalists for 'Plant of the Year' in the Great Pavillion and generated a lot of interest and promotion during the week in Chelsea. Bromeliads, let alone Tillandsias have seldom reached the highest award level at this highly-competitive world-class event. In barely 18 months since its commercial release abroad, *Tillandsia* 'Samantha' has truly earned the title of International Traveler.



Figure 4. *Tillandsia* 'Samantha', Finalist entry, Chelsea Flower Show, Photo Don Billington

## Events Calendar

### UNITED STATES OF AMERICA:

**SEPTEMBER 24 - OCTOBER 1, 2012.** 20th World Bromeliad Conference, Caribe Royale Hotel, Orlando, Florida. Contact [bbout@aol.com](mailto:bbout@aol.com)

### A WARM WELCOME TO NEW MEMBERS!

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## Membership Secretary Position

The BSI is looking for a volunteer to serve as Membership Secretary. Qualifications for this position include - should be trustworthy, loyal, helpful, friendly...no wait, that's something else. The Membership Secretary works closely with the President and other BSI officers and promotes membership in the society in accordance with policies established by the Board. The Membership Secretary maintains membership records, issues renewal notices and receives membership applications and renewals; computes and announces annually the number of directors allocated to each Region based on membership per Region and maintains a current directory of BSI membership; performs other related duties as they apply to the BSI. Interested parties should contact the BSI president at [president@bsi.org](mailto:president@bsi.org)



The BSI Seed Fund has found a new chairman! Many thanks to Bryan Windham of Kenner, Louisiana for taking on this responsibility.

More information to follow soon!



# The Bromeliad Society International

The purpose of this nonprofit corporation is to promote and maintain public and scientific interest in the research, development, preservation, and distribution of bromeliads, both natural and hybrid, throughout the world. You are invited to join.

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