

BROMELIANA

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A SHORT CULTURAL RAMBLE

by Herb Plever

Guzmania 'mini Lydia'

In the September issue of BROMELIANA, among the plants I reported having bloomed in my apartment was *Guzmania* 'mini Lydia'. I commented that this plant is small but not really mini. It has a diameter of 14 inches. As you can see from the photo, it has a striking inflorescence with bracts that are colored from bright yellow moving down to orange-red. And the bract tips are a dark purple maroon. The inflorescence of *Guzmania* 'mini Lydia' will stay in good color for five to six months before it starts to slowly fade. In the meantime it will start putting out lots of pups.

On reflection I realize that this plant had been grown in very low light. It was set back about four feet from my terrace door where it got minimal light and no sun except in the fall and winter in the late afternoon when the sun was going down in the west. I suspect that if it is grown in stronger light with a reduced frequency of my 5-11-26 fertilizer regimen, it may grow more compactly with shorter leaves.

The parent of this plant was grown under fluorescent lights, and when it bloomed, its lower inflorescence bracts were much redder than its now



Guzmania 'mini Lydia'

blooming offspring. That may also prove to be the case if its pups are grown in stronger light.

Aechmea 'Blue Tango' (Bullis)

I have enjoyed growing the beautiful (but large) *Aechmea* 'Blue Tango' for many years. The last time it flowered I cut back the leaves to give more light to the pups that were coming up. I took off and gave away the pups that came up, 4 in all.

After awhile the leaves turned to straw, but I continued to water and fertilize the medium as I was confident I'd get more pups. (I've gotten pups before from what seems to be a totally dead and dry plant; though it looks dead, the plant's stem or caudex is still viable and can produce more pups. Our broms don't easily give up life and can surprise you with more pups.) As you can see from the photograph on page 2, this *Aechmea* 'Blue Tango' has now produced six more small but strong pups.

Tillandsias in Pots

With a few experimental exceptions in which I grew *Tillandsia cyanea* mounted on cork bark (they survived but not very well), I've always grown glabrous-leaved tillandsias such as *T. cyanea* and *T.*

NEXT MEETING - Tuesday, October 1st, 2013 **promptly at 7:00 P.M.** at the [Ripley-Grier Studios 520 8th Ave. \(between 36th & 37th St\) Room 16M](#)

VIDEO OF SMALL PLANTS TO FIT YOUR SPACES - An advance look at some beautiful new plants, and some old favorites, that can be available on our spring order. The video will also include a look at [tillandsias you can grow in pots](#). Our discussion and your responses will enable us to reserve plants at the nurseries; this is especially important for tissue cultures as it will make it possible for us to receive more robust plants. Please bring in plants for sale and for Show and Tell.

leiboldiana in pots in a well draining mix. (Glabrous means the leaves have no trichomes, or only a few scattered scales). (See photo below of *T. 'Sandy'* and *T. 'Leo'* growing happily in pots. Both of the plants are cultivars of *Tillandsia cyanea*.) I still have a strong memory of a visit to the late May Moir's garden in the heights over Honolulu, when



T. cyanea at Nani Mau Gardens. Hawaii

I saw hundreds of *T. cyanea* in bloom, planted in the ground in many beds - with an intense fragrance from their large flowers. My *T. cyanea* flowers gave off only a faint scent. I also saw lots of *T. cyanea* in bloom planted in the ground around trees at the beautiful Nani Mau gardens on the big island of Hawaii. (See photo at the top.)

When I suggested in the September issue of BROMELIANA that we should start experimenting growing tillandsias in pots, I was thinking of using tillandsias that have some trichome covering. I have started trials with *T. kegeliana*. The leaves of this plant do have a coat of trichomes (especially on the undersides), but there are areas on the margins and on some leaves that are not coated and appear green.

I potted 2 *T. kegelianas* in my chunky peat moss mix that has some coconut fibre husks and perlite. The mix was first soaked with hot sink water for about 10 minutes and then both pots were placed in the sink filled with hot water that came up close to the midpoint of the pot. The pots were kept in the water for an additional 20 minutes so that a lot more water was absorbed up through the drain holes. Then all excess water was drained from the mix which was left damp enough to encourage rooting. (See photo below.)

One piece of *T. kegeliana* is growing under fluorescent lights and the other is growing about 1½ ft. back from a corner of my east-south-east window

where it gets a little dappled, early morning sun and mostly moderate window light. After 6 weeks they appear to be firmly in the mix. I have been foliar spraying them with fertilized water twice a week, and now begins the long process of waiting to see how well they grow and bloom..

I think many of the silver/grey tillandsias we've been buying can be easily grown in pots - even two or three in one pot. This may prove easier for members than mounting and soaking them.

Roots put out in a damp medium are different from the hold-fast roots epiphytic tillandsias grow to grab onto bark. Hold-fast roots are more wiry and are brown to black in color. Except when very young these hold-fast roots do not take up moisture. Years ago when I experimented growing bromeliads including tillandsias hydroponically, I was able to see the thick, whitish roots the plants put out into the water. I believe it is likely that the roots these two tillandsias are growing into the medium are a kind of water root that can indeed absorb water and nutrients.

Light Responsive Neoregelias

From time to time I used to publish data about the light responsiveness of different neoregelias that I tried to grow indoors. Of course, even those neos, that colored up in what we indoor growers like to think of as good light, pale in comparison to the plants we've seen grown outdoors in the South and elsewhere. Still, every once in awhile I see a neo that I can't resist trying to grow indoors, and I bought *Neoregelia 'Blushing Tiger'* (*N. 'Perfecta'* x *N. marnier-lapostole*) in our plant order in the spring. The plant was grown in my east-south-east window where it has been receiving lots of sun and has kept the intense red stripes of this cultivar. This indicates



Aechmea 'Blue Tango' with 6 new pups



L- *Tillandsia 'Sandy'* with *Vriesea 'Davine'*
R- *Tillandsia 'Leo'* with *Vriesea 'Vogue'*



Tillandsia kegeliana in pot

that it is very light responsive. (See photo opposite taken in September.)

In the late fall and winter when that window receives only early morning sun that is angled and relatively weak, I will move *N.* 'Blushing Tiger' to my fluorescent light unit. The fluorescent tubes put out light that is at the red/blue end of the spectrum (6000° Kelvin) and are kept on for 13 hours a day. I want to test this neo to see if it keeps its color just as my *Neoregelia* 'Gespacho' did. That neo actually developed more intense red under the lights than it did in my sunny south window.

(*N.* 'Blushing Tiger' was created by the very talented Lisa Vinzant; Lisa has made many strongly colored and marked cultivars such as *Aechmea* 'Cranberry Frost', *Billbergia* 'Grasshopper', *Cryptanthus* 'Richard Lum', *Cr.* 'Honeygirl', *X Neophytum* 'Andromeda', *Neoregelias* 'Wisteria', 'Palaka', 'Rainbow Wahine', 'Caviar', 'Blueberry Muffin', 'Hot Lips', 'Momona', 'Cloudburst', 'Dim Sum' and *Orthophytum* 'Brittle Star' to name a few of the hundreds of her beautiful crosses.

The 2014 World Bromeliad Conference

Bromeliads In Paradise, the 21st World Bromeliad Conference will be held from September 8th to 13th, 2014 at the Ala Moana Hotel in Honolulu, on Oahu island in the State of Hawaii. Hawaii consists of a chain of islands, some large and some quite small. The largest (and youngest) island is also named Hawaii, and it is frequently referred to as the "the big island". All of the Hawaiian islands are volcanic, and at least two still have active volcanos. The climate is wonderful and is propitious for growing plants, so most of the islands are ablaze with colorful, luxurious plants of every kind, including bromeliads.

Those fortunate to be able to attend, will have a chance to visit Lisa Vinzant's nursery and buy some of her hard to get plants. Bus tours will visit the Vinzant nursery on Oahu, David Shiigi's **Bromeliads Hawaii Nursery** and the **Bromeliad Sunshine Nursery** on the big island of Hawaii, and to the nursery of the fine neoregelia hybridist Sharen Peterson.

There are many wonderful things a visitor can see. Kauai is the oldest of the main Hawaiian Islands,



Neoregelia 'Blushing Tiger' (Vinzant)

having formed some 5 million years ago, with its volcano considered to be extinct and fully in the process of erosion. There are outstanding scenic drives around the island and up the mountain, beautiful Hanalei Beach and many gardens including the National Tropical Plant Garden.

Oahu is the site of Honolulu the state capital, with its famous Waikiki Beach. You can visit the Pearl Harbor

Memorial area, see great bromeliads in the Lyon Arboretum and hike the Summit Trail to the top of Diamond Head Mt. (It's only 1.6 mi. round trip.)

Maui is covered with plants, has many beautiful beaches and scenic drives to the near extinct, inactive Haleakala crater. The area around the crater, with undulating areas of red, rust, mauve and green are a sight to see, especially at dawn or before sunset.

The big island of Hawaii has a very active volcano called Kilauea, that erupts biannually. It last erupted in January, 2013 so you should be able to safely view the creator in 2014. At the base of the volcano at the coast, you can walk on the old lava flow to the edge of the sea where you will be able to observe orange, molten lava pouring out from the cliffs into the sea, in the process of island building. Mauna Loa in the center of the big island is also occasionally active. At the top of the extinct volcano, Mauna Kea, there is the world's largest astronomical observatory with 12 large telescopes through which you can observe distant galaxies. They are operated by different Universities and institutions and you will need to make special reservations to go up to the top. If you go be sure to take a very warm jacket as it is mighty cold at a 14,000 ft. elevation.

Most of the center of the big island is desert or mountainous, but on the west coast there is Kona where can visit coffee plantations, or look at the sea bottom from submarines with glass bottoms. On the east coast is the town of Hilo where you can visit the Pana'ewa Tropical Zoo in a rainforest. Also to be seen there are beautiful bromeliads at David and Sherlette's Bromeliads Hawaii.

You should seriously consider making this a vacation trip to Hawaii and plan to tour Oahu, the big island of Hawaii, Maui and Kauai. Register for the world conference at www.bsi.org.

Tissue Cultures

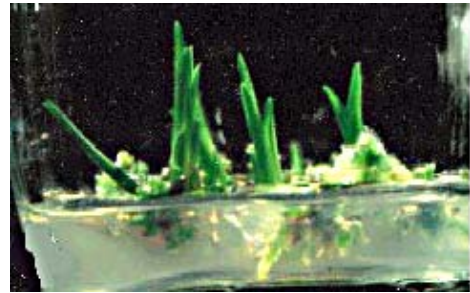
For a number of years we have been discussing, buying and growing small plants that were created by a procedure known as tissue culturing. Yet I suspect that some newer members are not clear about how that is done, so the following simple explanation might be of service:

The meristems of the plant are surgically removed, microscopically, under the same sterile conditions you would find in a hospital operating room. A **meristem** is a region of cells constituting the growing tip at the bottom of the center of the plant where new leaves are formed. There are also dormant meristems located on the stem at the internodes between the leaves and at the base of each leaf. (These cells produce pups after and sometimes just before the plant blooms.) The meristem cells are capable of dividing indefinitely into clones.

The meristem surface is sterilized against fungi, bacteria and viruses and then placed in an **agar** in a sterile container. An agar is a gelatinous, nutritious growing medium which promotes rapid growth of many hundreds of clone plantlets. When the producer deems the plantlets to be sufficiently viable to survive outside the protected container environment, the plants are separated and removed and placed in tiny peat pots. They are watched and periodically sprayed to protect them from infection.

Commercial considerations dictate the usual practice of selling the plantlets about six weeks after they have been established in the peat pots. Of course they will acclimatize to our drier indoor environment if they are kept at the tissue culture nursery even longer before they are shipped to us. The tissue cultures can easily be transferred, intact in their peat pot medium, into a small pot with a mix of premoistened coarse peat moss and other coarse drainage material, as described on page 2 of this issue. For a week or two I spray them every few days to encourage growth and rooting.

If the medium drains well you can water the plantlets twice a week until they are established in the pot, and then you can water them in your usual routine. I grow too many broms, and I find it easier to wick water my tissue cultures; they grow rapidly, as was demonstrated by the two pots of them I brought in for show and tell. I am encouraged by my success in establishing all of the many tissue cultures I bought in the last spring plant order. □



Plantlets first exposed to air, still in agar



Tissue cultures transferred to a sphagnum medium. Broms would be put in peat pots.

N E W S and *N O T E S*

NOVEMBER MEETING - The November meeting, normally scheduled for Tuesday, November 5th has been changed to Thursday, November 7th because of Election Day. Please note the new date.

MEETING PROGRAMS - Please give some thought to what meeting programs you would like to see, and bring your suggestions to the next meeting.

EDITOR'S ANNUAL PLEA for written material. Please submit a paragraph or short note describing your successes and travails in growing your bromeliads. Don't worry about style or grammar - I promise an excellent rewrite while retaining or enhancing your content. I don't care if its rudimentary, elementary or high-level. Please, just write it NOW!

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