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Hiroiyuki Takizawa - Tillandsia Explorer, Collector and Experimental Hybridizer

by Herb Plover

(Lynn Hudson's lively, interesting article on Hiroiyuki Takizawa that appeared in *Bromelcairns* #6, Newsletter of the Cairns B.S., Australia, stimulated me to write this piece. All photos are by H. Takizawa. I've excerpted material from Lynn's article, and updated it after email exchange with Hiro who has been a good friend for a long time.)

Hiroiyuki Takizawa, "Hiro", to his friends, is and has been an explorer/collector of tillandsias for many years. He was co-author of the *New Tillandsia Handbook* which contains excellent photos of tillandsias and habitat material for each plant. Professionally, Hiro is a noted kidney and vascular surgeon in Tokyo where he lives. He has had his own specialized kidney clinic since 2011.

Lynn's article revealed a new facet of Hiro's many talents. For the past 10 years he has been hybridizing tillandsias, primarily with his favorite, *Tillandsia dyeriana*, as the seed parent. He has been using the technique he calls "sterilized culturing"; he grows the hybrid seedlings selected from the cross in sterile containers in an agar (liquid nutrient) that was specially devised by him for Tillandia seedlings. (He does not want to reveal it at this time).

Note that this is very different from the procedure called tissue culturing in which a meristem (growing cell point) is removed from the center of the plant or from a leaf axil under sterile conditions and grown in a nutritious agar liquid. A single meristem can produce many hundreds of identical, cloned plantlets. Hiro says that a seedling grown in his agar will produce many pups. He has found that Tillandsia seedlings can be vulnerable to



T. dyeriana x *R. dielsii* (bottom)
T. dyeriana (top)



x *Racindsia* 'La Mano Magica' inflorescence

rot and disease when removed from their sterile environment, and they have difficulty acclimatizing to the greenhouse in which he grows his collected plants. Hiro says: "I love to discover new species in the wild, but not only that - I really love to create nice plants. No - only very, very, nice plants. I love *Tillandsia dyeriana* so I have made many *dyeriana* hybrids. My first one was *Tillandsia dyeriana* x *Racinaea crista*, registered as x *Racindsia* 'La Mano Magica'. This was the first bigeneric hybrid made between Tillandsia and Racinaea." The photo above right shows a closeup of the inflorescence of x *Racindsia* 'La Mano Magica' from the Bromeliad Cultivar Registry.

Another new hybrid is a cross of *Tillandsia dyeriana* x *Racinaea dielsii* (?) Both plants are shown in the photo on this page. The plant in front with six long inflorescence spikes was imported by Hiro from Ecuador as *Racinaea undulifolia* but Hiro believes it is *R. dielsii* (Harms) Luther. It is "cool-loving and requires high humidity; very rare and difficult to cultivate." It is a difficult feat just to be able to cultivate and grow those high altitude Racinaeas. It is a supreme challenge to produce viable bigeneric seedlings in which Racinaea is a parent, and it is extraordinary and 'hiroic'.

THERE WILL BE NO MEETING IN JANUARY.

BEST WISHES FOR a JOYOUS HOLIDAY AND a HAPPY NEW YEAR



Variegated *T. dyeriana* x *T. cacticola* seedlings in agar



T. dyeriana x *cacticola* with albomarginated and center stripe variegation, growing in greenhouse



varieg. *T. dyeriana* x *cacticola* growing in greenhouse

Hiro has made many crosses with *T. dyeriana*, including a recent one with *T. kautskyi* that he has just taken out of the sterile bottle and hopes to acclimatize in his greenhouse. He says: “I crossed *Tillandsia dyeriana* with *T. cacticola*. I got hundreds of seeds and sowed all in many separate culture boxes. I have been expecting variegation always ! My wish was really strong and I prayed everyday.”

“One day, I found one unusual seedling. It was a seedling with one or two variegated leaves. In a sterilized culture Tillandsias pup very well even when small, like 1 inch tall. I expected the seedling to pup from the variegated side. Then, my dream came true. Every pup had perfect variegation in every leaf. You can see the young variegated pups growing in the agar in a culture box in the photo above.”

“Now I’m really propagating them. Perfect variegation produces both marginated ones and center variegated plants.” (See photo above center.) But it is really very hard to grow these plants outside the box. It is a shame, but I lost many, many variegated ones trying to acclimatize them in my greenhouse.”

“The dry-growing character of the *Tillandsia cacticola* parent seems to be dominant in these plants; I think they need a dry environment which makes it difficult for them to accommodate to my humid greenhouse. I managed to get a few to grow (see photo of plant on cork bark above right), and only once did one of them bloom. It had such beautiful bracts with a color I had never seen before. Imagine a combination of delicate purple of the *cacticola* and orange of the *dyeriana* ! The bracts were 80-90 % *cacticola* purple and 10-20% slightly orange from *dyeriana*.”

“At that time my twin sons were just babies, and my wife and I were constantly exhausted taking care of their many needs. Caring for twin babies is more than

just hard. It is like a full-time job.”

“Honestly, I could not even make time to take a photograph of that inflorescence. Sadly, for 4 years or so since then none of the plants have flowered. That is the one reason that I did not register this variegated cross. But I’m sure there will be much more to this story, because the blooms will come.”

Hiro should have mentioned that he also had the responsibility to attend to his busy surgical practice while he assisted his wife in raising the twin boys. To his credit Hiro sincerely intends register them with the Bromeliad Cultivar Registry when he has an inflorescence to photograph .

It is a tradition in Japan to make a family celebration as boys reach 5 years of age (for girls it is done at age 3 and 7). The twins have recently had their 5th birthdays, so the entire family participated in a traditional ritual at a national treasure shrine and took this picture.



celebrating their 5th birthdays

YEAR END CULTURAL ROUNDUP

by Herb Plever

CHUNKY PEAT MOSS - In February I finally found a source for old-fashioned chunky peat moss - like the German peat we were able to buy when we first started to grow bromeliads in the 1960s and 1970s. This peat came from Canada - not the usual powdery stuff, but fibrous and in ½ - ¾ inch chunks.

To make a more friable mix, I added to the peat handfuls of perlite and what little shredded cedar mulch I had left, as well as some shredded coconut husks I had bought from the same dealer. The husks add friability while at the same time they stay slightly damp. This makes a mix that is aerated and drains well, but at the same time the peat retains just enough moisture to keep it damp for a long time. (Too) frequently I don't around get to watering my plants for 8 to 10 days or even more, so I have been growing many plants wick-watered. I wanted to see if the wicks would keep the plants too wet with the new friable mix.

I potted new pups and plants that I have acquired, and a few plants that were not growing well in cedar mulch in the new mix. After using it for 9 months I can see the results have been excellent even with wick-watered plants. I had planned to repot most of the plants that were still growing in my old cedar mulch mix, but I haven't found time to repot more than a few plants every once in awhile. I did pot up *Guzmania* 'Orangeade' in the new mix in August; it liked the mix so much that it started blooming in November. Likewise, my *Guzmania* 'Tangerine' that I repotted in my new chunky peat moss mix, flowered in October.

When I make a mix with the peat moss chunks, I run hot tap water through it before placing a plant in it. Be forewarned, however, that these thick chunks will only be surface-wet even after a 5 minute watering. To avoid having to hold the pot under water for a long time, I sit 3 or 4 pots with mix in the sink and fill it with enough hot water to cover the bottom one-third of the pots. Then I can leave it to attend to



Guzmania 'Orangeade' inflorescence 1/3 up in December

my other chores and when I come back in 15 to 20 minutes the peat chunks will have absorbed enough water through drain holes to be thoroughly moist.

Commercial bromeliad nurseries use fibrous peat moss they order in large bulk from the Baltic states like Lithuania. They then have the peat fine-milled and add friable small particles of perlite, bark etc. This is a more

economic use of the peat moss and it works for them because the plants receive frequent overhead watering in their greenhouses. However such a mix will dry out quickly, especially in the drier indoor environments of our members. So for indoor growers, the peat chunks will do a better job than the commercial mix.

For me, the acquisition of this peat was the most significant cultural event of the year. Les Graifman had bags of the chunky peat moss for sale in the spring. If you haven't bought any, you should try it. Les may still have some bags of peat left.

SOME 2 YEAR OLD PLANTS' PROGRESS - I bought a pot of 3 pieces of *Billbergia* 'Poquito Mas' from Grant Groves at the 2010 World Bromeliad Conference in New Orleans. They have been growing on my east-facing kitchen window sill and having been throwing pups. They get a few hours of morning sun and unobstructed horizon light on the 8th floor. One piece flowered in the fall of 2011, and three pieces (shown below) flowered in the beginning December. This plant

is light sensitive enough to develop some white markings and blotches even in the relatively low light from the east. But it is also not very photo sensitive to long periods of winter darkness; it flowered twice in my kitchen where the light is on in the evenings.

At that same 2010 conference I also bought a pup of the albomarginated form of *Guzmania* 'Denise' from Grant Groves and it has grown rapidly, set back three feet from a south



Billbergia 'Poquito Mas' (Beadle)

facing window. It is close to blooming, but it hasn't popped yet perhaps because I've kept it in its original mix of cedar mulch. This is an excellent cultivar; it is beautiful, is easy to grow and it produces uniformly albomarginated-leaved pups.

I have written before about my *Deuterocohnia meziana* that I bought in our 2011 spring plant order. It came as a pup already established in a pot (for my benefit, so I wouldn't have my hands torn up by its wicked, large spines while trying to pot it. It seems to love fertilizer, and by April this year I reported it had grown to 19" across and 10" high. I put it out on my terrace in May and didn't take it until the day before Hurricane Sandy hit New York. It certainly liked growing outdoors; its current measurements are 23" across and 13" high.



Cryptanthus 'Arlety'

UNDER FLUORESCENT LIGHTS - *Nidularium innocentii v. lineatum*, most cryptanthus, guzmanias, vrieseas and, surprisingly, *Billbergia* 'Strawberry' do well grown under fluorescent lights. *Cryptanthus* 'Arlety' is a gorgeous plant with leaves of vibrant pink and a light green center stripe(s), yet it has been many years since I've seen it any World Conference. It gets spectacular vibrant pink color under lights as you can see from the photo above. It is a DeCosta hybrid of *Cryptanthus marginatus* made in 1980. It is still available and will be on the Spring Plant Order, so make a note to include it in your order.

Billbergia 'Strawberry' defies accepted wisdom by getting red spots and pink blotches on its leaves growing under my fluorescent lights, while in my south window it develops a few white spots and stays mostly green.

FERTILIZING - During the year I modified my fertilizer regimen by using low nitrogen 5-12-26 fertilizer on all my guzmanias and on certain plants that I have found



Billbergia 'Strawberry' under lights

tend to get longer leaves with my regular fertilizer of 25-20-51 even when given good light. Among those are *Aechmea* 'Samurai' and *Quesnelia* 'Tim Plowman'.

The low nitrogen fertilizer is especially effective in keeping mini guzmania tissue culture plants to a mini size.

I still apply fertilizer every 7 to 10 days, and in my changed regimen I use only 5-12-26 every other watering. I used to skip

fertilizing once a month in what were the cold, winter months. We are supposed to be in the winter, but as of this writing in December, it has not gotten really cold. If the warm pattern of the previous few years persists (clearly due to global warming), I will fertilize regularly without skipping a week.

N E W S and N O T E S

2013 DUES are due and payable now. Single and joint memberships are \$25.00; the domestic subscription rate for BROMELIANA is still \$8.00 and an overseas subscription is \$12.00. Please mail your check payable to N.Y. Bromeliad Society to Barbara Lagow, 54 West 74th Street, #603, N.Y.C. 10023 or pay your dues at the Holiday Party meeting on December 20th.

ELECTION - The follow officers and directors were elected at the December meeting: Mimi Gussow, Pres., David McReynolds, V.P., Barbara Lagow, Treas., Herb Plever, Editor. Directors: Cynthia Percarpio, Veronica Saddler and Victoria Ehrlich.

NO MEETINGS REMINDER - There will be no meetings in January and February.

<u>OFFICERS</u>	<u>DIRECTORS</u>
President.....Mimi Gussow	Cynthia Percarpio
Vice-Pres..David McReynolds	Veronica Saddler
Treasurer.....Barbara Lagow	Victoria Ehrlich
Editor.....Herb Plever	

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