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ON ROOTING (there is a time for every season...) by Herb Plever

It is well told in *Ecclesiastes 3* that there is a right time for everything to be done, including a time to plant. More specifically, there is a right time to pot up a bromeliad, particularly atmospheric tillandsias, so they will quickly root in the medium.

As a general proposition it is said that tillandsias produce roots in inverse proportion to the density of

their trichome coverage, ie. glabrous leaved tillandsias with minimal or no trichomes have strong root growth while trichomed atmospheric tillandsias produce just enough wiry roots to attach themselves to the tree, branch or rock they are holding on to. This goes contrary to the basic idea of my experiment designed to prove that we can grow atmospheric tillandsias in a pot, as reported in the January issue of Bromeliana. I'm trying to show that we can induce potted st atmospherics to behave like terrestrials.

Dr. David Benzing says of

bromeliad rooting that: "...activity is greatest during the summer when the parent shoot is growing vigorously and manufacturing carbohydrates at high rates. Episodes of root growth or inactivity may be governed by environmental cues including day length and availability of water." (The Biology of the Bromeliads page 47.)

After successfully potting and rooting *Tillandsia* kegeliana and Vriesea poenulata, I started a larger experiment, potting about 20 atmospheric tillandsias in 4 pots at the end of October. Because in our indoor environment the so-called growing season lasts longer than under outdoor conditions, I felt I could proceed



Pot of tillandsias rooting on warm convector

even though I was aware of the seasonal slowdown. But even in my indoor apartment, in the fall and winter the light is reduced, it is drier and it is much cooler. We don't put on the blower motors in our heating convectors even when it is very cold outside, although the valves are open. (This permits the 1 foot pipe leading to the convector to hold hot water and

stay hot.)

So in the context of the above rooting principles, this experiment was begun out of season at a time when many plants slow down their growth and their production of carbohydrates. Nonetheless some of the tillandsias did root quickly while many others rooted very slowly. But after a month some plants were still shaky in a few pots. They all stayed healthy because they received daily sprays of fertilized water.

Plants grow vigorously and produce food at high rates in the summer

because light is strongest - AND because the temperatures are uniformly warm to hot. I think the key to the failure of many of the tillandsias to grow roots was that the medium was cold. I discovered this fact when I put my fingers in the medium to firm up the shaly plants and found that while it was quite damp (the pots were wick-watered), it was very cold to the touch. In the winter the temperatures at the windows range from mid to high 60°s F. during the day down to as low as 58° F. late at night. In November, 6 days had temperatures below freezing, 19 days had temperatures between 32°F. and 48°F. and 23 days were overcast.

THERE WILL BE NO MEETING IN FEBRUARY

Bromeliana

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So after firming up all the loose plants in the beginning of December, I placed a few pots on top of the heating convectors which are quite warm from the hot water pipe. The convectors are directly in front of the windows. During the month of December, 13 days had temperatures below freezing, 15 days had temperatures between 32°F and 48°F. and 24 days were overcast. (Of course the temperatures at night during these months were almost always in the 20°s.)

Remarkably, warming up the medium did the trick; even without the blower motor, the heat from the convectors warmed up the medium and induced root growth from the tillandsias. While writing this article in early January, I must note that the temperature early in the morning of January 4th went down to 6° F.; on January 7th it was 2°F. Still, except for one plant that was shaky and one that was barely so, all the rest of potted tillandsias are quite firm in

the medium. Surprisingly, as you can see from the photo above right, this even includes *Tillandsia fuchsii forma gracilis* which I potted almost on a dare to myself.

The same principles for a proper time for rooting also apply to determine the right time to remove and pot up pups. Due to reduced light and lower temperatures in the late fall and winter, plants and their pups tend to be somewhat dormant. It is a good idea to keep pups on their parent until the Spring when they will more readily establish themselves in the medium.

We will have a large list of beautiful tillandsias in the plant order in April; you should take advantage of the good prices and buy enough of them to fill 2 or 3 pots so you can enjoy the fun and the challenge to grow them that way. If you can succeed in doing it, you will avoid having to soak them. \Box

NAME CHANGES IN GENUS VRIESEA FROM THE NEW TAXON LIST

Here is a list of some of the changes made in species of the genus *Vriesea* in the new Bromeliad Taxon List compiled by Eric Gouda and Derek Butcher that may of interest to our members. Note that in many cases a species has been transferred to different genus; many of the changes listed were made when the genera *Alcantarea* and *Werauhia* were created. The term "sensu" as used in the list means "as described by". The new list can be accessed only on line at http://botu07.bio.uu.nl/bcg/taxonList.php.

Vriesea aeris-incola => Tillandsia aeris-incola Vriesea albiflora => Vriesea rubra Vriesea alborubrobracteata => Vriesea dubia Vriesea andreettae => Tillandsia andreettae Vriesea aurea => Vriesea chrysostachys var. chrysostachys Vriesea barclayana => Tillandsia barclayana Vriesea barclayana var. minor => Tillandsia barclayana var. minor Vriesea burle-marxii => Alcantarea burle-marxii Vriesea carinata sensu Mez => Vriesea erythrodactylon Vriesea carinata var. constricta => Vriesea paraibica Vriesea cathcartii => Tillandsia cathcartii Vriesea cereicola => Tillandsia cereicola **Vriesea corallina =>** Vriesea platynema var. platynema Vriesea corallina var. striata => Vriesea platynema var. striata Vriesea drewii => Tillandsia drewii Vriesea duvaliana sensu Alexander => Vriesea incurvata

Vriesea duvaliana sensu Wittmack => Vriesea erythrodactylon Vriesea edmundoi => Alcantarea edmundoi Vriesea ensiformis var. warmingii => Vriesea warmingii Vriesea espinosae => Tillandsia espinosae Vriesea fragrans => Tillandsia fragrans Vriesea gigantea (Martius ex Schultes f.) Mez => Vriesea amazonica Vriesea gigantea illust. sensu Lemaire => Vriesea glaziouana **Vriesea gigantea Lemaire =>** Vriesea imperialis Vriesea gigantea sensu Carriere => Vriesea geniculata Vriesea gigantea sensu Regel => Vr. geniculata Vriesea gladioliflora => Werauhia gladioliflora Vriesea glutinosa Wawra =>Vriesea neoglutinosa Vriesea glutinosa var. viridis => Vriesea friburgensis var. tucumanensis Vriesea hitchcockiana => Tillandsia hitchcockiana Vriesea imperialis => Alcantarea imperialis Vriesea incurva => Tillandsia incurva Vriesea kupperiana => Werauhia kupperiana Vriesea leucophylla => Werauhia leucophylla Vriesea leucophylla var. subtessellata => Werauhia leucophylla Vr.. longibracteata => Vr. splendens v. formosa Vriesea lyman-smithii => Werauhia lyman-smithii Vriesea macrochlamys => Werauhia macrochlamys Vriesea macropetala => Tillandsia macropetala Vriesea macropoda => Vriesea incurvata Vriesea maculata => Tillandsia maculata Vriesea olmosana => Tillandsia olmosana Vriesea olmosana v. pachamamae => Tillandsia olmosana var. pachamamae Vriesea paludosa => Vr. friburgensis v. paludosa

Vriesea psittacina v. duvaliana => Vr. duvaliana **Vriesea psittacina var. exilis** => Vriesea psittacina var. psittacina Vriesea psittacina var. erythrodactylon => Vriesea erythrodactylon **Vriesea rauhii** => Tillandsia werneriana Vriesea regina => Alcantarea regina **Vriesea sanguinolenta** => Werauhia sanguinolenta Vriesea psittacina sensu E Norton => Vriesea carinata Vriesea psittacina var. brachystachys => Vriesea carinata Vriesea psittacina var. bracteis omnino coccineis Vriesea psittacina var. rubro-bracteata => Vriesea psittacina v. carinata => Vriesea carinata Vriesea saundersii sensu L.B.Smith => Vriesea friburgensis var. paludosa Vriesea sintenisii => Werauhia sintenisii **Vriesea spectabilis** => Guzmania spectabilis **Vriesea splendens major** => Vriesea splendens var. formosa Vriesea splendens var chlorostychya => Vriesea splendens var chlorostachya Vriesea splendens var. longibracteata => Vriesea splendens var. formosa Vriesea splendens var. major hortus ex Foster => Vriesea splendens **Vriesea tillandsioides** => Tillandsia tillandsioides **Vriesea tweediana Baker** => Vriesea rodigasiana (Note that the names 5 of the above plants that we have grown or have been growing for some time have been changed: Vriesea barclayana is now *Tillandsia barclayana, Vriesea cereicola* is now *Tillandsia cereicola, Vriesea espinosae* is now Tillandsia espinosae (no surprise), Vriesea rauhii is now Tillandsia werneriana and Vriesea splendens *var. longbracteata* is now *V. splendens v. formosa.*)



(Vriesea) now *<u>Tillandsia</u> espinosae*



(V. rauhii) now <u>Tillandsia</u> <u>werneriana</u> - (ph Anwyl Br)



(Vriesea) now <u>Tillandsia</u> barclayana



(var. longbracteata) now Vr.splendens vr. formosa

SINGAPORE is noted for its many beautiful parks and gardens, especially the new, exotic, Gardens by the Bay, and the Singapore Botanical Gardens. Travelers fortunate to have the time and money to go to Singapore, should be sure to visit the Tropical Butterfly Garden in Terminal 3 of Changi Airport.

Erin Titmus of the New Zealand Bromeliad Society took the photo below of a huge butterfly composition made up of many red cryptanthus. It was published in the August, 2013 issue of Bromeliad, Journal of the N.Z. Society.



LYNN HUDSON - For many years Lynn has been a leading force in building the Cairns Bromeliad Society in Australia, in publicizing bromeliads, providing educational seminars and often zany excitement to light fires and to keep broms in the limelight. She has served as President, Secretary and Editor of BromelCairns, their newsletter for many, many years. I do not mean to ignore the equally yeoman work of her husband Bob Hudson - they are a team - but this is a brief note of admiration for Editor Lynn's work which I do appreciate, as I have served in that capacity in New York for over 40 years.

Other noted bromeliad experts have recognized Lynn's contributions by naming 2 beautiful new cultivars for her. Andrew Flower, former Editor of the BSI Journal, crossed *Tillandsia lindenii* with *T. wagneriana* and named one of the progeny *Tillandsia* 'Lynnie'. And the noted hybridizer John Arden has recently named a new *Vriesea* cultivar, *Vriesea* 'Lynnie'. The seed parent is *V.* 'Midnight Splendor' x 'Shima Rhyu' and the pollen parent is Herb Hill's *Vriesea* hybrid #353-1. Look at and admire the plants in the photos below.



Tillandsia 'Lynnie'



Vriesea 'Lynnie

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