

# BROMELIANA

PUBLISHED BY THE NEW YORK BROMELIAD SOCIETY

October, 2018

Vol. 54 No.7

## A SURPRISE DYCKIA BLOOM

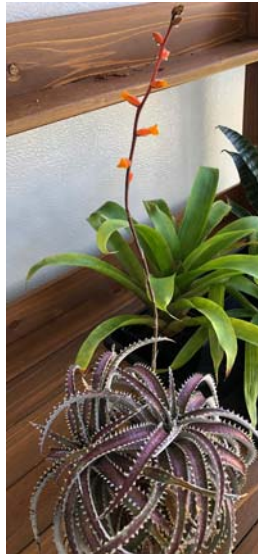
by Herb Plever

There are 172 recognized species in the genus *Dyckia* that can be found in Brazil, Bolivia, Paraguay and Argentina. There are 183 *Dyckia* cultivar hybrids registered in the Bromeliad Cultivar Register (BCR). In habitat most *Dyckias* grow in rock crevices in open sun in semi-dry to dry areas at moderately high altitudes; yet they tolerate a wide range of temperatures from very hot to cold and from dry to high relative humidity.

*Dyckias* typically start to bloom from October to January, likely triggered by the onset of cold temperatures. They have thick, succulent leaves and utilize CAM metabolism to produce and absorb nutrients through photosynthesis.

Many years ago I bought some *Dyckias* from Bill Baker, the great *Dyckia* hybridizer. I was attracted to them and thought I could grow them in my south-facing window, though I was uncertain that they would do well in my apartment which had high humidity provided by four humidifiers.

For 2 or 3 months the *Dyckias* looked like that had adapted to my apartment. But, a few plants had large amounts of incipient scale, and I was too inexperienced to recognize the telltale shiny smut on the leaves as scale eggs. When the scale infestation broke out, especially on the beautiful *D.* 'Toothy' it



*Dyckia* 'California'



*Dyckia* 'California' in flor.

spread and affected adjacent plants; my topical insecticide sprays were unable to put down the infestation. (At that time I did not know about systemic insecticides such as Cygon 2E that was totally effective in killing all sucking insects. Later on I used it for many years before its distribution in the U.S. was banned because it was suspended in a carcinogenic medium.)

I dumped the infected plants and I didn't get any new *Dyckias* until I bought *Dyckia* 'Cherry Coke' (*D. platyphylla* x *D.* 'Carlsbad') from one of our Spring plant sales. The photo on the BCR

shows bright maroon leaves which I was not able to achieve in my south window. My plant has dark, smokey leaves, more like the soda Cherry Coke. Later, I bought *D.* 'Icicle' (it's unregistered); had I checked I might not have purchased it.

At one of the World Conferences 4 or 6 years ago, my friend, Doris Kiernan of Queensland, Au., generously gave me a small *Dyckia* 'California' (unregistered). It had bright red leaves with white spines, but even when I grew it in my south-facing window, the red turned to maroon - the color you see in the photo on this page. In typical *Dyckia* fashion it produced a companion plant which quickly equaled its mature size of 7.5 inches across.

From early May 2017, (when my wife's ill-

**NEXT MEETING** - Tuesday, October 2<sup>nd</sup>, 2018 **promptly** at 7:00 pm at the Ripley-Grier Studios, 520 - 8<sup>th</sup> Avenue (betw. 36<sup>th</sup> & 37<sup>th</sup> Ave) **Room 16M**.  
**DYCKIAS** - A slide review of their habitats, species, cultivars and growing tips. Please bring in plants for show and tell and for sale.

ness was diagnosed as Stage 4 cancer), to early April when all of the boxes filled with the possessions that I moved with were finally unpacked and I was settled in my new digs in Long Island, my broms suffered from total neglect. They were watered every 3 to 4 weeks (when I remembered). Nonetheless bromeliads are really tough; they survived and grew without much damage - (even the tissue cultures I had been growing 4 in a pot since April 30, 2017).

I have 3 window boxes in the two windows in my bedroom which also serves as a plant room and computer station, and I bought a two tier plant stand with LED lights. Although I had sharply reduced my brom collection, still there was not enough room for all the plants I moved with me. So I had to put some plants out on my glassed in (with screens) terrace, including *Dyckia* 'Cherry Coke' that had clumped to 3 large plants with a spread of 2 feet. It has wicked spines which make it difficult to grow in any of my three crowded window boxes.

It was very cold in February, 2018 with consequent low humidity when I moved to Long Island, so I bought a humidifier that raised relative humidity to 40-50% and all the broms did well despite the cold, especially *Dyckia* 'California' which I first grew on the LED light stand until early May when I put it out on my terrace.

From April up until now the terrace, which faces west-southwest and gets strong afternoon sun, has been very hot with 60-75% relative humidity. We had a four or five week spell of temperature in the 90's followed by temperature in the high 80's, but the terrace plants (even the newly potted tissue cultures) fared well because I watered them every 5 or 6



*Dyckia* 'Cherry Coke'

days.

In early July I noticed that an inflorescence was coming up from a lateral (side) axil on *Dyckia* 'California'. It grew to a height of 11" and put out 9 bright orange flowers, starting from the bottom.

At this writing in late September the flowers have dried, but I can now look forward to seeing other lateral inflorescences as the plant is still growing from the center. This plant has adapted well despite the fact that its new environment does not at all conform to what is deemed its

"typical" horticulture.

I don't intend to bring the *Dyckia* 'Cherry Coke' indoors for the winter. It takes up too much space and the spines are dangerous when put in a crowded window box. I'd like to see how the plant fares in the cold when winter comes. When the temperature gets down below freezing, I plan to throw a few heavy towels over the plant, especially at night. In any event, it will have to survive or die and be disposed of. I'm hoping that when it gets cold, this will trigger blooms.

I think *Dyckias* make excellent houseplants, as they tolerate a wide range of temperatures and humidity - and there are lots of small cultivars to choose from such as the 4" *D.* 'Angelita', 'Brittle Star', *choristaminea*, *fosteriana*, 'Lad Cutak', 'La Rioja', *platyphylla*, and *remotiflora*. □



*Dyckia fosteriana*



*Dyckia platyphylla*

## WHIPKEY'S WORD - SWAMP

by David Whipkey

(Reprinted from the September, 2018 Newsletter of the Houston Bromeliad Society.)

The word of the month is swamp. Lately when I watch the news, the word swamp comes up frequently; unfortunately it always has a negative connotation. There has to be something good about swamps. That got me to thinking: "Are there any Bromeliads that grow in swampy areas?" If there are, they would probably love Houston. After all, wasn't Houston built on marshes, swamp, and prairie?

The Merriam Webster Dictionary (<https://www.merriam-webster.com/dictionary/swamp>) defines the word swamp as: "wetland often partially or intermittently covered with water; especially: one dominated by woody vegetation, a tract of swamp, a difficult or troublesome situation or subject." (Oh, that is what they mean in the newscasts.)

I think I like definition #1. When I hear the word swamp, I think of the Everglades, or the Okefenokee Swamp. But let us not forget that the Amazon River basin, located in Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela (I had to look this one up) also contains swamps, as does the Pantanal region, located in Brazil, Paraguay and Bolivia - lots of swamp land. There must be some Bromeliads growing there.

Think about the growing conditions in a swamp: high humidity, wet ground/poor drainage, shady near ground, woody plants and trees growing in or near the water, under the water partially decayed organic matter (future coal deposits).

Swamp growing Bromeliads can be broken down into two major groups:

Plants growing terrestrially near the water, and plants

growing epiphytically above the water.

All of these plants thrive in areas where there is good air circulation; they need to be warm, shady, humid, and wet. Sounds like my backyard in the springtime. I think most of us can duplicate those conditions. Remember that these plants usually grow near, or above, but not in the water. If you want to be successful with swamp Bromeliads you need to: keep them moist, but not sopping wet, give them good air circulation, avoid bright sunlight, keep the humidity high and protect them when Jack Frost comes to visit.

Keep these conditions in mind and you should be successful growing swamp Bromeliads. The terrestrial swamp Bromeliads include: *Aechmea magdalenae*, *Canistropsis seidelii*, *Deuterocohnia meziana*, *Guzmania bismarckii* and *Vriesea bituminosa*. The epiphytic swamp Bromeliads include: *Aechmea bracteata*, *Catopsis nutans*, *Guzmania musaica*, *Quesnelia arvensis*, *Tillandsia flexuosa* and *Vriesea bituminosa*.

One bromeliad, *Puya dasylirioides*, actually grows in sphagnum bogs. The plant's roots are in the wet acidic ground below the water and a trunk holds leaves above the moss growing on the surface.

If you are looking for something a little different, give our swampy friends a try.

(*Editor's Note* -The arrival of climate change type hurricanes like Hurricane Florence, which poured tons of water on the Carolinas, portends that swampy areas will be expanding, but it may take more time than we have in our lives to see new bromeliads adapting to those conditions.)



*Tillandsia flexuosa*



*T. flexuosa* inflorescence



*Guzmania musaica* inflorescence



*Canistropsis seidelii*  
photo by Dorothy Berg

## BROMELIAD DIVERSITY AND GENETIC IMPLICATIONS

In a large population of any species in habitat, there will be found significant variations in color, size and conformation between and among individual plants. Some of these variations are physical responses to changes in conditions which may occur, especially at the peripheries, but some variations may also be genetic with actual changes in the plant's DNA. It would appear that the DNA in some plants may in part be unstable and that changes in their environment can trigger mutations of their DNA.

This should not be surprising in the context of the evolutionary history of family *Bromeliaceae* that Dr. David H. Benzing calls "An Adaptive Radiation". Our knowledge of biology has come a long way from the simplistic and rigid views of Mendel that were overthrown by the findings of Charles Darwin, and modern biology has already reached quite radical views of their genetic implications. Two or three decades ago scientists experimented by inducing

changes in the cytoplasm surrounding the nuclei of onion cells and found that such changes had resulted in mutative changes in the DNA of the nuclei.

Subsequent and more recent work has confirmed this most radical idea - that under some circumstances environmental changes may induce genetic mutation! Genes produce proteins to carry out different functions according to the genetic code of an organism's genotype. But the very process and function of those proteins may be influenced by environment to the extent that the coded morphology and behavior of the organism may be changed.

The study of relationship between genes and the environment and protein processes is called **Epigenetics**. I was impelled to write the foregoing thoughts while watering my bromeliad collection, and I noted significant differences between vegetative progeny that are many generations removed from the same parent. HP

### High Humidity And My Broms

by Herb Plever

When I moved out to South Setauket in eastern Long Island in February, it was very cold and the indoor relative humidity was low. It became lower when I needed to keep some heat on in the apartment. By mid-April, however the outside temperatures warmed up a lot, and the relative humidity has zoomed to between 60% and 75% (occasionally even higher).

My plants, especially the Tillandsias, are reacting as if they were (happily) back in the rain forest. They have never looked so good or grown so fast. It's probably not necessary to water them at all, but I give each log a 30 minute shower in my Shower Stall every 9 or 10 days.

In May I finally got around to potting my tissue cultures that had been growing four in a pot, I placed most of them in my two-tier LED light stand. I left three of them on my terrace. We had four or five weeks of temperatures in the 90's or high 80's, it was broiling on my terrace. Still the humidity was so high that the tissue cultures rooted quickly and grew fine when I watered them every 5 or 6 days.

The photo below of one of the Tillandsia logs I am growing under LED lights mounted under my extended window sills shows how happily my Tillandsias are growing



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**BROMELIANA** is published 9 times a year by the New York Bromeliad Society, c/o Herb Plever, 1 Jefferson Ferry Dr. #7379, S. Setauket, NY 11720. email addr: hplever@verizon.net