



Florida Council of Bromeliad Societies



Vol. 34 Issue 2

May 2014

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On the cover: *Pitcairnia tabuliformis*. Photo © Karen Andreas

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Catching Up, Staying Even

In this issue you will find the first in a series of article on the pioneers of the bromeliad world, the people who formed and informed our societies and our collections. These articles are all based on the work of **Barbara Whittier** and **Bud Martin**, who compiled and curated this material in an effort to preserve the legacy of these individuals: **Mulford** and **Racine Foster**, **Edgar Ensign**, **Oather Van Hyning**, **Theodore Meade**, **Julian Nally** and **Henry Nehrling**.

Chapter One features Mulford Foster, through the eyes and words of Racine, his wife and tireless, often unsung companion on tremendous bromeliad adventures. The next installment will feature their renown home, Bromel-La, in Orlando, and their ground breaking book, *Brazil, The Orchid of the Tropics*.

This work by Barbara and Bud is a true gift to us all. Through their support of and commitment to this project, the legacy of these individuals will be preserved and shared with everyone. After publication in this newsletter, the articles will also be posted on line at the Florida Council site (fcbs.org) under Bromeliad People.

The Council still plans to publish a paper copy of the State Roster in August (see page 33). The list of previous roster managers is not long: **Carol Johnson**, **Geoff Johnson**, **Len and Inez Dolotowski**, and **Michael Andreas**. To these venerable managers, **Susan Sousa** now joins as the current caretaker of the list of all members of the Florida Council.

With the end of all but one printed issue of the Council newsletter, Council representatives are now debating a revision of the dues and assessment format. Currently, each society is assessed a \$10 membership fee and a \$3.00 per address fee in order to partially underwrite the cost of the four printed newsletters a year. Check with your representative for details and to give feedback on the most equitable methodology of calculating this cost.

There are so many people in our bromeliad community whose talents and contributions go beyond plants. This past December, Florida East Coast Bromeliad Society screened the movie, "Spies Beneath Berlin" an award-winning documentary about a secret intelligence operation during the Cold War in which FECBS member **John Quirk** had a key role. **Calandra Thurrot** speculates that FECBS may "be the only bromeliad society with a former spy as a member."

It is with regret that the Council announces that the **Bromeliad Society of Broward County** has withdrawn from the Council. BSBC sent a donation to the Council with its resignation: \$100 to the FCBS Al Muzzell Weevil Fund and \$100 for the Council website. Thank you to the members of the Bromeliad Society of Broward County for your many years of support and this generous contribution.

2014 Bromeliad Sources

An Annual list of Bromeliad Sources in Florida

Bromeliads Galore

Dave Johnston

6399 90th Avenue North, Pinellas Park 33782

Home: (727)544-9187; cell: (727)481-5962

Hours are after 4:00 PM Monday through Friday; all day Saturday and Sunday; call for appointment

johnston28@tampabay.rr.com

Approximately 1000 different species and hybrids in pretty much all genera across the board, including bi-generics.

Color Zone Tropicals

Grant Groves

17936 W. Phil C. Peters Rd, Winter Garden 34787

(407)616-7595

(The nursery did not move; only the address has changed.)

www.colorzonetropicals.com



Jungle Gems

Marty Baxley

4719 Huron Road, St. Petersburg 33708

(727)504-8951

susiebaxley@verizon.net

By appointment

Selections from all genera

Mike's Bromeliads

Mike Michalski

10565 SW 109 Street, Miami

(305)279-2416

pgonza7782@aol.com

By appointment only

Michael's Bromeliads, Inc.

Michael and Donna Kiehl

973 First Dirt Road, Venice 34292

Cell: (727)415-7276



This listing continued next page

Nursery open daily by appointment.

info@michaelsbromeliads.com

www.michaelsbromeliads.com

Visit us on Facebook

We specialize in a wide range of bromeliad types including Neoregelia, Billbergia, foliage Vriesea and terrestrial varieties. Visitors are always welcome, please call or email for an appointment. Our current catalog is available on our website at

www.michaelsbromeliads.com/Master_Plant_List.pdf

The Nature Collection

Shirley and Richard Konefal

2319 Taylor Street, Hollywood 33020

(954)922-5582

By appointment only

grillskonefal@aol.com

www.thenaturecollection.com;

www.facebook.com/pages/The-Nature-Collection/123218014400179

A retail bromeliad nursery ranging from small collectibles to large landscaping specimens; also offering a collection of artistic driftwood mounts, hangings and sculptures; shipped across the USA.



Plants N Things by George

George and Irene Aldrich

746 NE 35th Street, Ocala 34479-2712

(352)629-1913

By appointment

plantsnthings5@cox.net

Specializing in bromeliads

Powell's Nursery

Robert Powell

1002 Bayvista Drive, Tarpon Springs 34689

(727)938-0831

Hours: 8-5 daily (please call first)

rpowell110@tampabay.rr.com

Growing and selling mainly bromeliads

Randy's Bromeliads & More, Inc.

Randy Garcia

(813)241-0500

This listing continued next page

Mail order only

www.randysbromeliads.com

randysbromeliads@msn.com

Russell's Bromeliads

15100 Lost Lake Road, Clermont 34711

(407)656-5541; Fax: (407)656-7640

Monday - Friday 8:00 - 5:00

Specializing in quality Tillandsias

T & C Tropicals

Tim and Colleen Hendrix

21 Holly Lane, Plantation 33317

(954)931-1711 or (954)530-0076

By appointment only

timbo-169@comcast.net

Our nursery is located in the heart of beautiful historic Plantation. We have hundreds of different varieties of Neoregelia and Tillandsia.

Tropiflora

Dennis and Linda Cathcart

3530 Tallevast Road, Sarasota 34243

(800)613-7520/(941)351-2267; fax (941)351-6985

sales@tropiflora.com

www.tropiflora.com

Monday - Friday, 8:00 - 5:00; Saturday, 8:00 - 3:00

Established in 1976, our nursery specializes in collectible plants such as bromeliads, but includes orchids, succulents, aroids, much more. Our bromeliad collection includes 4,000 varieties of species and hybrids, an inventory of over 1,000,000 plants housed in 6 acres of greenhouses and shade houses. Mail order world-wide. Visitors welcome, no appointment necessary.



Tropiflora Spring Festival

Pioneers of the Bromeliad World

Mulford and Racine Foster; Edgar Ensign; Oather Van Hyning; Theodore Meade; Julian Nally; Henry Nehrling

With this issue, this newsletter starts a series of articles about the pioneers of our bromeliad community, the men and women who set the standards for collecting, research, education, and bromeliad societies; they elevated their passion for bromeliads into lasting legacies that serve us to this day. So many of these pioneers lived in Florida and became closely associated with our state.

Barbara Whittier and Bud Martin have assembled an amazing presentation on these pioneers and are allowing their work to be reproduced in this newsletter. Some of you may have seen this presentation on display boards and in programs by Barbara Whittier. The Council is grateful to both Barbara and Bud Martin for allowing their work to be on display in this newsletter and on the Florida Council website, fcbs.org, under Bromeliad People.

We are also grateful to an incredible resource, Michael B. Spencer Bromeliad Research Collection, Special Collections and Archives, University of Central Florida, Orlando, Florida, for providing material and support to the authors.



Mulford and Racine Foster

This first installment is an introduction to the Father of Bromeliad Societies, Mulford Foster. The next installment will feature Bromel-La, the renowned home of Mulford and Racine Foster in Orlando, as well as their ground breaking publication, *Brazil: Orchid of the Tropics*.

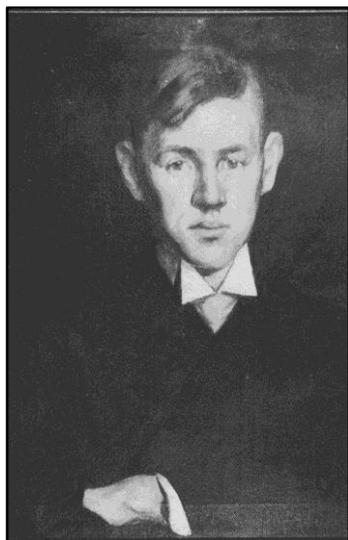
Racine's contributions often go unnoted but she was critical to their shared work; the majority of the material in this article is based on her memories and writings in the Council's publication, *Grande*, all four volumes of which may be viewed online at fcbs.org, under Newsletters.

Barbara and Bud's work on Ensign, Van Hyning, Meade, Nally and Nehrling also will be published in upcoming issues of the Council newsletter

Mulford Batemen Foster

1888-1978

**Based on writings by Racine Foster
by Bud Martin and Barbara Whittier**

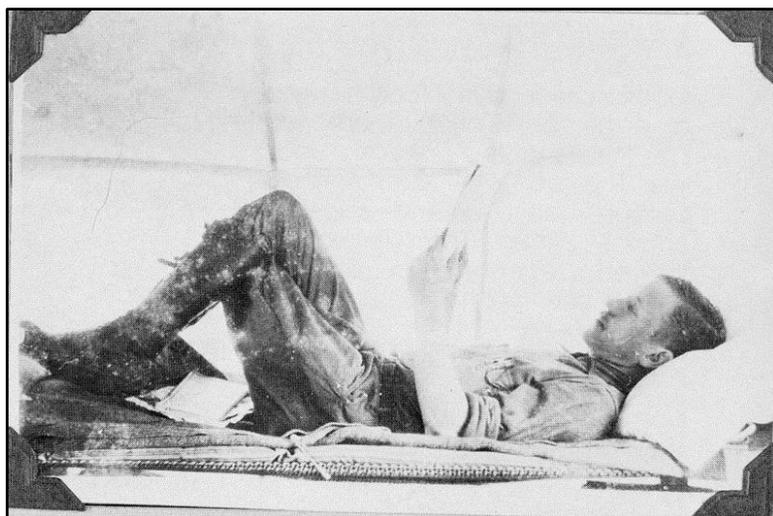


Mulford grew up exploring the woods around New Jersey collecting snakes, lizards, wild plants and making his own small gardens around the family home. He became educated in business and graduated from a Philadelphia business school and later worked at his father's newspaper and became Associate Editor.

In the early 1900s he became a naturalist and lecturer for Boy Scouts, colleges and YMCA. The New Jersey State Board of Agriculture realized his natural talents and hired Mulford to lecture tour around the state on the value of snakes, lizards and turtles at the Farmer's Institutes. He became known as the "Snake Man". It was his ability to engage the public and please the audiences with his enthusiasm, humor and interesting facts.

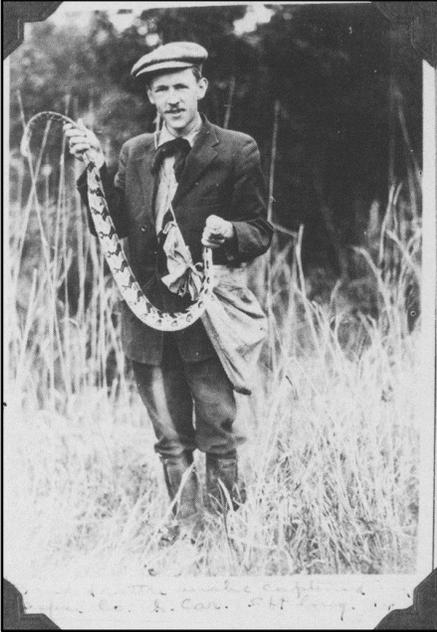
August 1912

Here is Mulford resting at Camp Kennebec, Maine; he was the scout naturalist for the Boy Scouts of America at this time. In order to get young charges to take a nap after lunch, he had to do so, also. For a man of action, that was the first time he ever stopped after a meal!



This article is based on Bromeliad Pioneers, a presentation and program by Barbara Whittier and Bud Martin. All photos and material by Racine Foster, from Grande, Vol 1(2) unless otherwise indicated.

The Snake Man



In 1913, Mulford saw his first bromeliad, Spanish Moss, on a trip to Florida; the palm and other foliage were so stimulating he knew then that he had to get back.

On the way south in Jasper County, S. C. he captured this five foot rattler (left). Snakes were a passion at the time; he had the largest private collection in the country.

He worked for the Davey Tree service and in 1923 made a major decision to change his profession to his real passion, that of landscape architect. He moved to Palm Beach, Florida and began the design and development of Exotic Gardens. Later moving to Orlando, Florida. It was in the Orlando area, that he made his mark on the many businesses around town, designing gardens at Lancaster Park, Horseshoe Ranch, Episcopal Cathedral Church of St. Luke, Orlando Garden Club, Floating Islands of Leesberg to name of few.



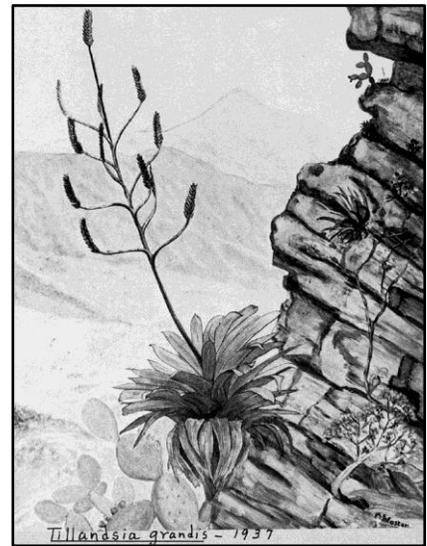
Photo by M. B. Foster

First home of the Fosters at 718 Magnolia Avenue, Orlando, Florida. Their first greenhouse was called "Orchidario" more orchids, tropicals and the beginnings of the famous Bromeliad collection. Around their 3-acre meandering walkways and garden sheltered hundreds of species.

In the Jungles of Orizoba, Vera Cruz, Mexico 1935



Mulford's first big collecting trip was in 1935. Although he made seven trips to Mexico. He was very impressed with the terrain, the contrasts under which he found bromeliads, high and dry one day---in low and humid valley the next.



I remember very vividly standing down there on the plain crying to him, "Honey, come back, you'll break your neck," because he was climbing up this steep cliff--- the plant was growing---incredible---on nothing but rock---in all that dry, windy country it didn't have a chance, yet it was blooming---fulfilling its life cycle.

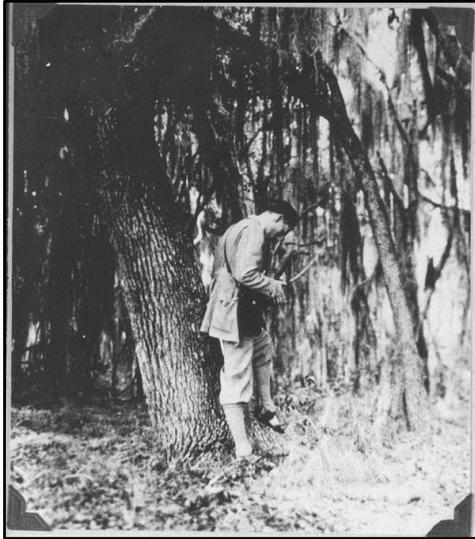
Cuba - 1938

In Cuba we tramped from one end of the island to the other, always looking for palms, as well as bromeliads.

I'll never forget the Cuban Monastery where the rats ran over us and the great big sea crabs crawled out on us. We had a tiny pallet to sleep on---it's a good thing we were both thin. We put out our only candle on the dirt floor and tried to sleep, when here come the crabs! Great big, orange crabs---they belonged on the ocean shore line over 6 thousand feet directly below us; we were on the high mountains, but crabs all over us!

We called to the Brother down the hall, "What are we going to do?"---"Oh," he says, "that happens all the time." So, we decided to go to sleep, despite. Then, next thing we knew, a rat

came running over our bodies—“Think nothing of it,” says the Brother, “who cares anything about rats?” Mulford found a stick and started swatting—we probably slept an hour that night. Sleep 10 minutes, hit a rat, sleep another 10 minutes, hit another rat.



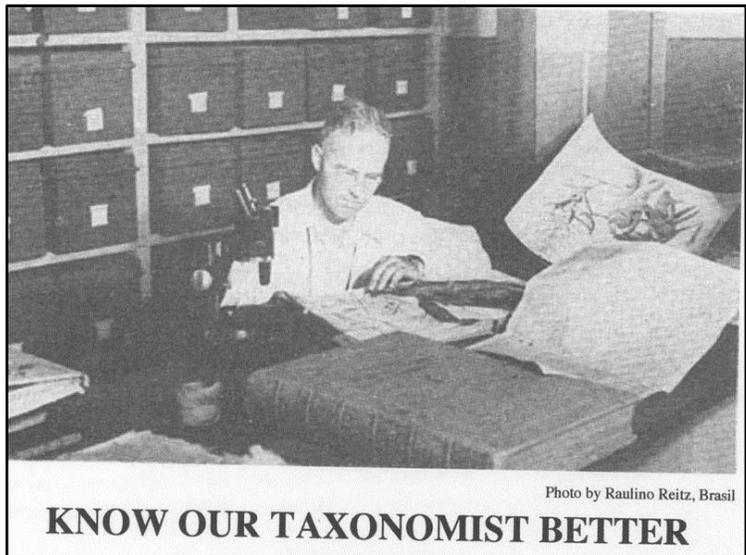
Here’s Mulford with his Graflex camera---he always wore knickers because they were so convenient walking among the plants.

Mulford moved to Palm Beach, and worked with what he loved best,--plants. He met many famous men, including Mr. Vanderbilt, who one day saw Mulford photographing, and said “Say, I would like some photographs of my garden. How about it?”

Shortly thereafter he began his career as a landscape artist. He entered a landscape office looking for a job, drew a few sample plans; they were so well done they just hired him on the spot.

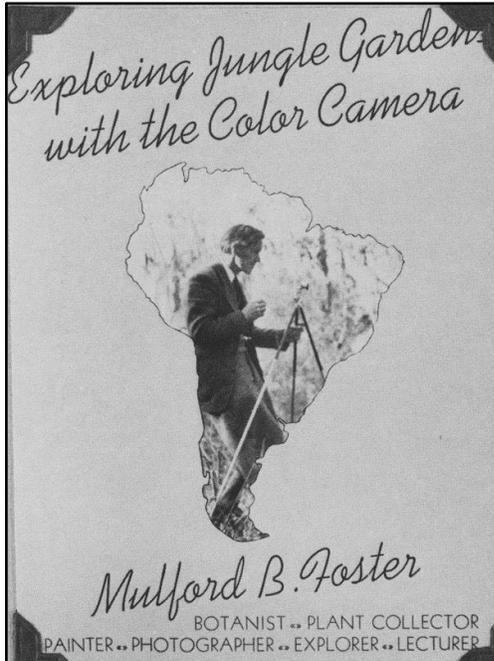
In 1938, he met Lyman B. Smith, Bromeliad specialist and taxonomist working at the Harvard Gray Herbarium, and Lyman immediately helped in the identification of many of the new genera and species Mulford discovered. It was Lyman who suggested visiting Brazil.

Lyman B. Smith, the botanical taxonomist of the bromeliads in the Americas, studied and researched bromeliads for 27 years at the Gray Herbarium at Harvard and later at the Smithsonian. His continued work on the taxonomy of the family Bromeliaceae provided international uniformity with naming of the many genera and species of the three orders of bromeliads. He is known for his three monographs of Pitcairnioidea, Tillandsioideae and Bromeliodeae.



BSI Journal 1954 V4(1)

1939



Mulford was an excellent lecturer. Full of humor, pithy comments on human nature, and revelations about plants, his lectures were in demand locally and cross-country---Dallas, New Orleans.

One of the big ones was the Garden Club of America in New York City. He was called on for 30-35 years to lecture.

In 1939, Mulford and Racine took a 6-month trip to collect bromeliads in the jungles of Brazil. In following some of the past plant explorers, he was able to “rediscover” a number of lost specimens and new genera and species. He also introduced the yellow flowering *Tabebuia umbellate* to North America.

In 1940, he and Racine made a second 6-month expedition to Brazil and Trinidad specializing in bromeliads, orchids and philodendrons.

During the war years, Mulford spent his time writing articles for the Bromeliad Society Bulletin, New York Botanical Garden and Smithsonian Report, corresponding with scientists and friends in the field of tropical plants and bromeliads, always adding to his knowledge and sharing with others the love of plants.

1939 – Brazil -1940

The collecting disease had descended on both of us---we were eager to go to another country; Brazil was the choice. Since the Brazilian jungles had already been scoured by famous collectors in the past hundred years or more, we were told not to expect to find many new species. Well, I think we knocked down, oh, 150 or so new species in Brazil alone, and over 200 total in other countries.

Many kind people helped us in every way; but in rural areas we were under suspicion at all times because only a crazy person would collect those “weeds”---why would anybody want those parasites?

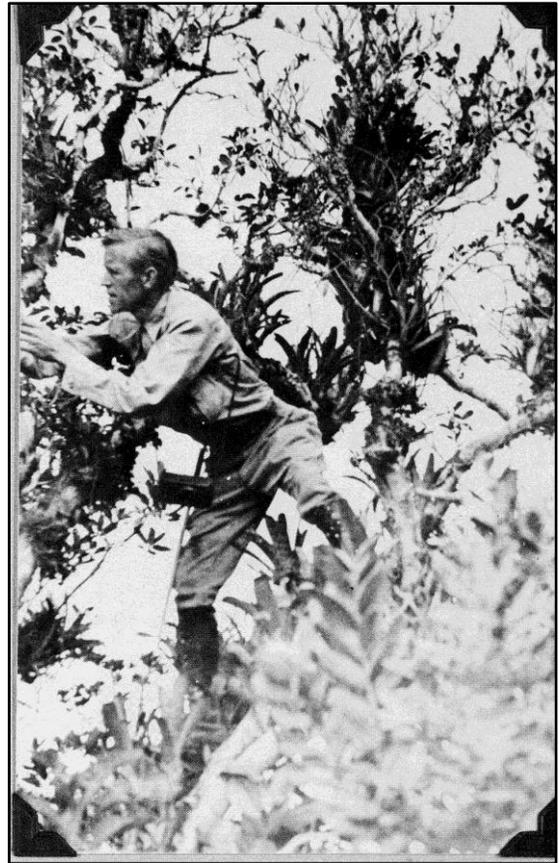
Only a loco person would do that!

He was in constant communication with Lyman B. Smith who helped with the identification and descriptions of the new species.

In 1948, he made a collecting trip through South America, from Dutch Guiana, Brazil, Bolivia, Peru, Ecuador, Colombia, Costa Rica, Cuba, Puerto Rico and Trinidad.

In 1951, they were off to Venezuela collecting bromeliads.

In 1954, Mulford visited Jamaica with his final plant collecting trip in 1957.



1946 - Colombia—1948 Round South America

Our trip to Colombia had much significance because we followed the footsteps of Andre, the great French collector who had covered this path 100 years before.



Mulford went alone in '48 to Surinam, Brazil and Bolivia where he studied *Puya raimondii*. Then on to Peru, Panama and Costa Rica where collecting was limited because of a revolution.

Botanical drawings were done at night. Mulford would work all day collecting plants which in warm countries, in heavy boots, kaki clothes was a hard job---especially if you had to walk 10 miles, which

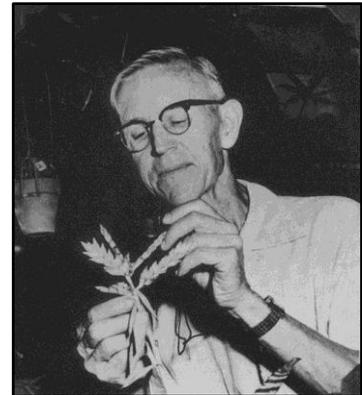
we did, or if you rode a mule which we did. He would return to headquarters wherever that might be, a pension, a tent, a barn. No matter how tired he was, he would spend half the night making colored botanical drawings. (See Bromeliad Gallery, page 18.)

I was always amazed because I was 20 years younger and after a hard day's work, I was tired enough to go to sleep. But he was full of life; this is why I never thought of him as older, chronologically he was, but energetically, no! I marvel at the energy that man had. Why, here was a new plant! Why bother with eating or sleeping?

1940-1960---Hybridizing

Mulford loved plants so much that he had to sort of feel that he was a god with them in reproducing their form—he didn't intend to possess many plants--his scientific mind just wanted to inquire into what made these plants tick---wanted to know how to pollinate---how to reproduce---curious about results of cross pollination. He just wanted to know if his little paintbrush could do what the bees ordinarily do.

He made hundreds of crosses, but alas, did not keep complete records.



Mulford's self portrait reflects his philosophy of life. The diagonal lines on the left of the painting represent rain; the corresponding area on the right, the rays of the sun; the mass at the base, earth elements; acting together they create the energy force which becomes plant life.

The abstract face represents many feelings and sensitivities to man's connection with the earth: the durable chin expresses Mulford's determination to learn everything possible about plants including the plants' ability to withstand man's intrusions. The right eye is a seed which represents Mulford's external vision---color, form and design. The eye on the left represents his penetrating, farsightedness; the star in the center signifies a reaching out to infinity. In its entirety the portrait is Mulford B. Foster---the spirit, the force, the man.

Throughout his life he was producing photographic type paintings of leaves, bark of trees, snakes, flowers, landscapes around his Orlando home of Bromel-La and the many *Tillandsia* and other genera of bromeliads he discovered in Central and South America. He was known as the

“passionate plant lover” from his last paintings called the Palm Family, Orchid Family and Cactus Family.

In 1940, he was the first hybridizer of the self-heading philodendron.

In 1951, he received the Herbert Medal for his over 188 new species discovered and over 40 varieties of bromeliads.

In 1962, he received a citation from the American Horticulture Society Congress for his contribution of discovery and hybridization of bromeliads.

Mulford B. Foster - Father of the Bromeliad Society Field Collecting and Exploration in the Tropics

Mulford began traveling to Mexico in 1935/36 with his wife Racine Foster. His keen vision, liveliness, resourcefulness and Racine’s dedication to care of plant collections, both live and herbarium pressed, organizing materials and detailed record keeping provided for many years of research material. Mulford’s field work expanded over the next 20 years, following the footsteps of past plant explorers into Mexico, Brazil, Bolivia, Peru, Ecuador, Colombia, Dutch Guiana, Venezuela, Costa Rica, Puerto Rico, Jamaica and Trinidad.

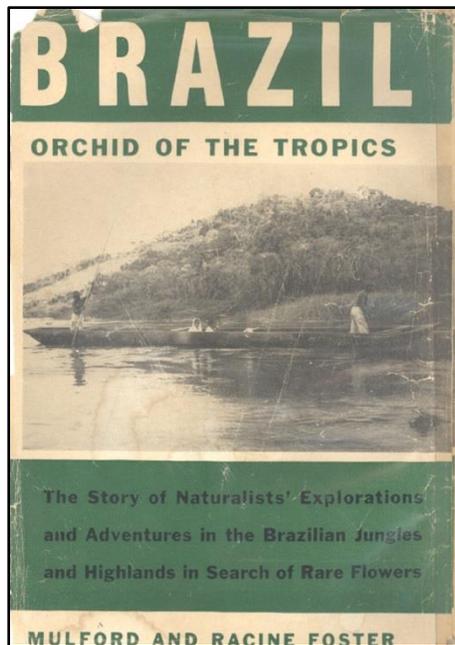
In 1939, Mulford and Racine took a 6-month trip to collect bromeliads in the jungles of Brazil. In following some of the past plant explorers, he was able to “rediscover” a number of lost specimens and new genera and species. He also introduced the yellow flowering *Tabebuia umbellate* to North America.

In 1940, he and Racine made a second 6-month expedition to Brazil and Trinidad specializing in bromeliads, orchids and philodendrons.

During the war years, Mulford spent his time writing articles for the Bromeliad Society Bulletin, New York Botanical Garden and Smithsonian Report, corresponding with scientists and friends in the field of tropical plants and bromeliads, always adding to his knowledge and sharing with others the love of plants. He was in constant communication with Lyman B. Smith who helped with the identification and descriptions of the new species

In 1946, with the extensive records and collections of preserved and live material, the Fosters wrote one of the most popular books of the time, Brazil: Orchid of the Tropics.

In 1947, they resumed their expeditions, this time back to Brazil and later Colombia. In Colombia, they followed the path of an earlier explorer, Edouard Andre. This area was considered some of the most important bromeliad regions in Latin America.



During all of his expeditions, he not only collected bromeliads and tropical plants but collected thousands of herbarium specimens that went to the Gray Herbarium at Harvard University and later to the Smithsonian Institution of Washington, D.C. where all the scientific data was filed for further studies. He also collected thousands of seed material and live plants to be distributed to botanical gardens and friends that later was added to the horticultural markets and our gardens and homes.

Why was Mulford B. Foster so successful in the field of exploration for unusual plants and diverse bromeliads? He read the literature on expeditions of past plant explorers, following their trails, discovering yet unidentified species and genera of bromeliads, and other tropical plants introduced to the United States for the first time.

Edouard Andre, landscape architect designed City of Paris in 1860, later Head Gardner of Paris in 1866. Designed over 100 private and public parks from England, Russian Empire, Austria-Hungary, Europe, Switzerland, Netherlands, Denmark and Bulgaria. In 1875-76, Andre went on a botanical expedition to the foothills of the Andes, bringing back to the botanical gardens of Europe some of the first bromeliads, orchids, and other tropical foliage seen from the Americas. (Wikipedia.Edourd Andre.org)

Contributions to Science and Horticulture

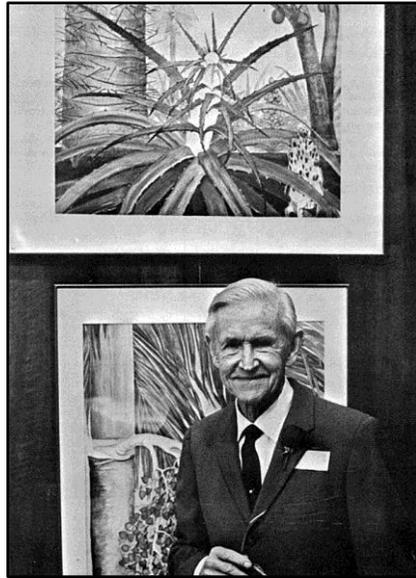
1. Between 1936-1957, collected plant and seed material of tropical plants with emphasis in bromeliads in Central and South America.
2. Throughout his expeditions, live and pressed plant material were collected for verification and scientific study. Over 1,000 pressed specimens went to Harvard and the Smithsonian for Lyman B. Smith to identify and verify.
3. His success was due to the fact he would collect live material and in many cases non-reproductive material, which did not flower until many years later in his Bromelario or gardens. Once in flower, pressed material was made and sent to Lyman B. Smith for further identification and verification.
4. Discovered over 188+ new species of bromeliads to science.

5. In Brazil alone, he discovered 107 new species and some not seen since the type was discovered. The “type” is the first collected and pressed plant and sent to a taxonomist (plant identifier), stored in a herbarium at a university or botanical garden for other botanists to reference. This establishes the first internationally accepted name.
6. Developed over 40+ hybrid bromeliads for the market.
7. Cofounder of the Bromeliad Society in 1950.
8. Extensive writer for the Bromeliad Society Bulletin, New York Botanical Garden, Smithsonian Institution in Washington, D.C. and in constant communication with others interested in bromeliads including in Central Florida Theodore Mead, Henry Nehrling and Julian Nally. (Check out the BSI Archives and read about his exciting collecting trips and bromeliad culture.)
9. Introduced such plants to the horticultural markets as *Tabebuia*, three new palms, four *Amaryllis*, *Eucharis*, cactus, *Peperomia* and *Zephyranthes*.
10. Mulford B. Foster’s fieldwork expanded over 20 years, following many of the early plant explorers into Mexico, Brazil, Bolivia, Peru, Ecuador, Colombia, Dutch Guiana, Venezuela, Costa Rica, Puerto Rico, Jamaica and Trinidad.
11. Throughout his life he was producing photographic type paintings of leaves, bark of trees, snakes, flowers, landscapes around his Orlando home of Bromel-La and the many *Tillandsia* and other genera of bromeliads he discovered in Central and South America.
12. His skill for art and painting nature brought him the title as the “Passionate Plant Lover” from his last paintings called the Palm Family, Orchid Family and Cactus Family. Throughout the Bromeliad Society Bulletin from 1951 to 1970s you can see his illustrations in the front cover or as part of an article.
13. In 1940, he was the first hybridizer of the self-heading philodendron.
14. In 1951, he received the Herbert Medal for his many discoveries of bromeliads throughout Central and South America and his horticultural hybridization of bromeliads and other tropical plants that impacted the gardening markets of today.
15. In 1962, he received a citation from the American Horticulture Society Congress for his contribution of discovery and hybridization of bromeliads.

Bromeliad Gallery



Mulford and
Racine at
Bromelario.



Mulford at the Hunt Institute
with his painting.



Fosters' garden.



Vriesea imperialis in the Foster
garden. Photograph by Barbara
Whitter, 1973.



Bromel-La. Photo: BSI Journal, V23(5).



Racine by split-leaf philodendron. Photo: BSI Journal, V04(2).



Dyckia fosteriana from Emboque Parana photo by C Gastaldi

Dyckia fosteriana in the Foster garden. Photo by C. Gastaldi, courtesy fcbs.org.



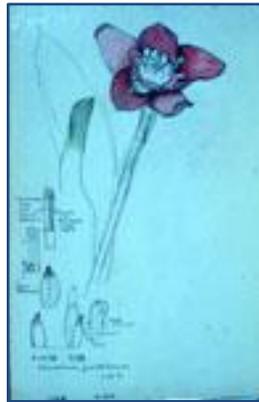
Mulford with Phytogeography class of Dr. Whittier. Photo by Barbara Whittier, 1973.

The following photographs of Foster field illustrations are courtesy of Michael B. Spencer Bromeliad Research Collection, Special Collections and Archives, University of Central Florida, Orlando, Florida

“Each evening, while in the field, Mulford would make drawings of the plants in flower, trying to provide as much detail as possible.” Julian Nally



Aechmea



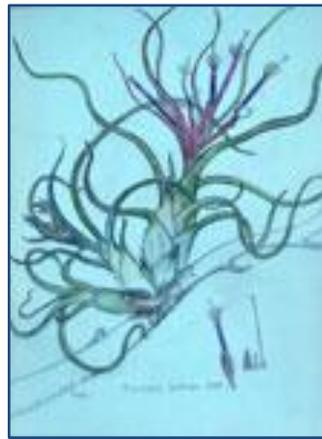
Canistrum fosterianum



Neo. melanodonta



T. tueneri

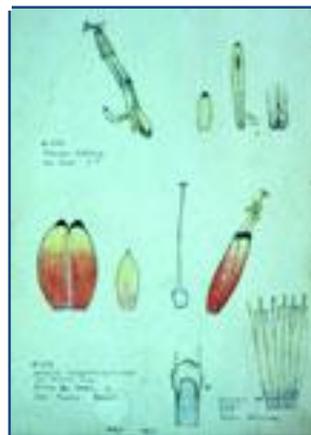


T. bulbosa



T. secunda

Vr. ensiformis



Out of the Dark Room and into the Digital Age

Bromeliads and Digital Photography

by Karen Andreas

The advent of the digital age moved photography out of the dark room, off of film and into the hands of just about anyone who can point and click. These days, cameras autocorrect, autofocus and generally make photography accessible and easy. With a few pointers, you can take bromeliad pictures like a pro.

The most important thing to remember is that practice makes perfect. Now that you don't have to worry about paying buckets of money to develop film, feel free to take as many pictures as you can bear to take. Pixels are free! While this article will offer some pointers on how to achieve good bromeliad photographs, your best tutor is practice. Take hundreds of photographs, then cull out the very best and delete the rest.

The first decision to make is what is the purpose for your photograph exercise? Are you showing plants in place, such as habitat shots, or are you looking to show off a great bromeliad?

If this is a habitat shot, then the bromeliad will be in its natural state, warts and all. These certainly are valuable photographs since they contribute to an understanding of bromeliads in their own environment, connected to the ecology of their surroundings.



Aechmea aquilega, in Jacobina, Bahia, Brazil Photo © Oscar Ribiero

Pictures don't lie. They do indeed show all the flaws, all the dirt and debris. If your purpose is to show off a bromeliad, then you will want to do some cleaning and grooming. The degree to which you go is entirely up to you.



Tillandsia
araujei



It was not practical to take down the Tillandsia for cleaning (left) but it was worth taking a few minutes to remove stray oak leaves.



Guzmania 'Optima'



This Guzmania is a great subject for photographing but needed some clean up. Picking out leaves and twigs and a quick, soapy bath yield great results for the camera. Unless you are going for the shiny look, let the plant dry since the wet leaves and inflorescence will reflect light and create white spots.

Turn the plant around until you have the best leaves and best side of the inflorescence displayed. Scale and brown spots will show up. You can wash off the first with soapy water and carefully trim brown edges for best effect.

Taking photographs in the yard means you have to take light into consideration. Overcast days, dawn and dusk can be optimum times since glare is minimized, and you do not have to be conscious of the sun's position. Sunlight can bleach out leaves and colors, create glare on foliage, or cast shadows across the plant. A general rule of thumb is to stand with the sun behind you. By tilting your camera in various angles, you can mitigate some of the sun's glare.

Beware windy days!



The differences may be subtle so choose the effect you want.

Left: sun is behind photographer.

Right: sun is in front of photographer.



Left: picture is taken on an overcast day.

Right: picture is taken on a bright day.



Just because the plant is sitting in one place does not mean you must be static as well. Move around the bromeliad, tilt the camera up and down, stoop down and point the camera up, stand up and point the camera down. The quality and especially color will change depending on your position relative to the bromeliad. Some colors are notoriously difficult to photograph. Red is tough – often you will find the red looks orange or there are hues of orange or yellow in the red. Take pictures at different times of day, in differing light conditions. Remember, you are not wasting film, only temporarily consuming pixels.

Use sunlight to achieve different effects. Some bromeliad foliage is beautiful with the light filtering through the leaves. You might also capture the shadows of flowers inside the inflorescence.



Aechmea 'White Knight'



Vriesea erythodactylon



One method to control your light conditions is to use a back board. You can find a display board at most office stores, at Target or craft stores. Attach a black cloth to the board – avoid shiny material as light from the flash will bounce off it. Use a second piece to cover the surface in front of the board.

A polyester velvet type fabric or photography cloth will do just fine. Check at a fabric store or, for the photography cloth, look at a hobby shop or online for photography supplies.



You can place your plant level with the bottom of the board or slip a pot underneath cloth to elevate the bromeliad, producing a "floating" effect.



The following pictures were taken in natural light, on a patio. Experiment with your own lighting conditions and different times of day to see what will yield the best results. Experiment with the flash on your camera – the flash can make a big difference in the depth of color.



A flash was used for the picture on the left; no flash on the right hand picture.

To get those great close ups of inflorescences, flowers and scurf, use the macro setting on your camera. Again, practice will teach you how close you can get before it all turns to a blur. Windy days will work against you as will shaky hands. Tripods are available for most cameras, and tabletop size tripods work for patios and confined spaces.



Both pictures were taken using the macro settings. In the one on the left, no flash; flash on the right.



Above left, *Dyckia fosteriana*
Above right, *Ursulaea macvaughii*
Right, *Tillandsia ionantha*



Now that you have taken all your hot shots, load the pictures onto your computer and, using a thumbnail program, scroll through them all. Delete all the dogs! Delete all the marginal

pictures. There is no reason to clutter your computer with boring or bad pictures.

Take your photographs in as high a resolution as you would like. If you plan on printing pictures, you certainly do want the higher resolution.

If you plan to use your pictures on Facebook or in other social media, in a Power Point presentation, in a document or email to a friend, you definitely want to size down the picture. The number one mistake made with photographs is to use them (as mentioned above) or send them in their original size, which generally is quite large. Un-sized photographs will bog down a presentation program or document; they eat up too much space and make things move way too slowly.

You can always decrease the resolution of pictures but you cannot go from low to high.

In your graphics program, such as Photo Shop, look for the image sizing feature. Select 800 x 600 for the pixel size (for vertically oriented photograph, use 600 x 800). This format will work easily in most applications.

Have fun with botanical photography! Click away and don't be shy. Practice will pay off.

Editor's note: more than 115 pictures were taken for this article and the best culled from that group. No bromeliads or pixels were damaged in this creation.

All photograph © Karen and Michael Andreas, unless otherwise noted.

Correction

In the February issue of this newsletter, the exhibitor of this *Cryptanthus microglazioui* was incorrectly identified. The correct exhibitor was Steven Hopkin.



Mexican Bromeliad Weevil Report

January – March 2014

Teresa M. Cooper¹, Ronald D. Cave¹, and J. Howard Frank²

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Research on the host bromeliad effect on the Mexican Bromeliad Weevil's oviposition rate, growth and development, and survival continues. We have been testing the weevil's oviposition rate on various bromeliads. The bromeliads are placed individually into cages, with 1 to 15 gravid weevils (Figs. 1-3).

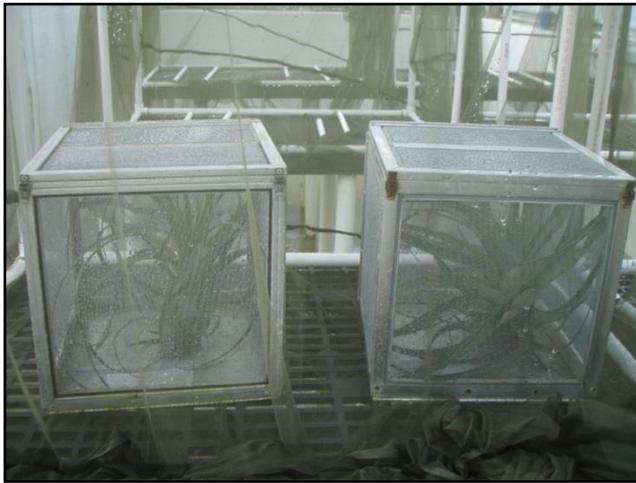


Fig. 1. Florida *Tillandsia utriculata* plants in cages, each with 2 gravid Mexican bromeliad weevils.



Fig. 3. Central American *Tillandsia utriculata* plants in cages, each with 2 gravid Mexican bromeliad weevils.



Fig. 2. Pineapple tops in cages, each with 1 or 2 gravid Mexican bromeliad weevils.



Fig. 4. Central American *Tillandsia utriculata* leaf sample being tested for toughness using a penetrometer.

The weevils remain in the cage for 1 to 5 weeks. Then we break the plants down, recover the weevils, and check each leaf for eggs and larvae. We measure the length and width of the leaves, count the number of leaves, and measure the stem volume and weight, % sugar content, and leaf toughness (Fig. 4). So far, we have tested, or are in the process of testing, 6 Central American *Tillandsia utriculata*, 22 Florida *T. utriculata*, 5 *Guzmania monostachia*, 43 pineapple tops, and 5 *T. fasciculata*. We have begun sorting the data, but we need to do more testing to determine the weevil's oviposition rate on these bromeliads.

We are beginning to test the growth and development of the weevils on whole plants of the same species and varieties and we are re-testing the oviposition rate, growth and development, and survival of the weevil on bromeliad leaf material (rather than whole plants), replicating the research we previously did. As well, we continue to collect samples from Florida *T. utriculata* and Central American *T. utriculata*, with the goal to determine if these two forms of *T. utriculata* are the same species, using DNA analysis. The sampling method is not harmful to the bromeliad; we cut a length of leaf from 3 center leaves, put the leaf material in a baggie with desiccant, and mail it to Ryan Moraski at the Florida Museum of Natural History, who does the DNA sampling. So far, we have collected 43 samples from Florida *T. utriculata* plants and 10 from Central American *T. utriculata*. The Central American *T. utriculata* came from Tropiflora and Russell's bromeliads. The Florida *T. utriculata* came from 3 homeowner's homes (Port Orange, Clearwater, and Fort Pierce) and from the Enchanted Forest Sanctuary. More samples will be collected from State Parks.

Field trips were made to Loxahatchee National Wildlife Refuge on 5 March, 12 March, and 1 April 2014 (Figs. 5 and 6). The *T. fasciculata* and *T. balbisiana* populations in Loxahatchee were monitored from April 2002 to February 2005 in 3 mapped areas in a cypress forest. The bromeliads that died in that time period were counted and



Fig. 5. Loxahatchee National Wildlife Refuge.



Fig. 6. Root balls left where a large *Tillandsia fasciculata* once grew (Loxahatchee National Wildlife Refuge).

cause of death was determined. Monitoring began with 116 bromeliads. At the end of the study, there were 61 bromeliads remaining and nearly all of the dead bromeliads were killed by the weevil. In March 2014, only 2 of the bromeliads remained in the mapped areas. Forest surrounding the mapped areas reflected this loss of bromeliads – there were very few *T. fasciculata* or *T. balbisiana* remaining. We are planning field trips to other state parks and preserves with weevil-infested bromeliad populations that were previously monitored, with the goal to determine the long-term effect the weevil is having on Florida’s bromeliads.

We do not have a fly colony at present. We will not be able to get more flies until autumn of this year.

Mexican Bromeliad Weevil Report Archive

An archive of the Mexican Bromeliad Weevil reports, chronicling the research by the authors can be found on the website of the Florida Council of Bromeliad Societies at <http://fcbs.org/weevil/weevil-reports.htm>

More Weevil Information at fcbs.org

[Saving Florida’s Native Bromeliads: FCBS and the Evil Weevil Upheaval, a slideshow presented by Dr. Barbra Larson at the 2000 FCBS Bromeliad Extravaganza](#)

[Up Close and Personal with the Evil Weevil – One Man’s Encounters with Medamasius callizona, a photo essay by Olan Ray Creel](#)

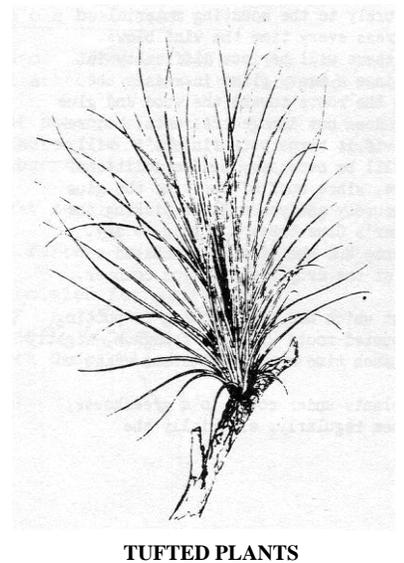
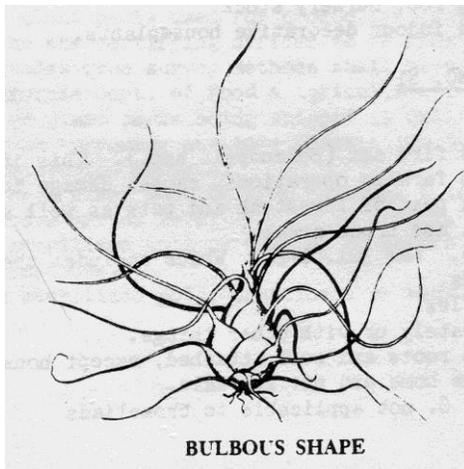
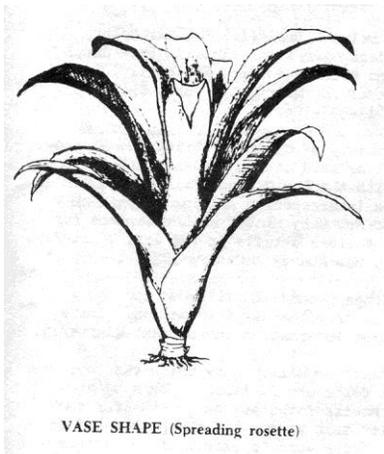
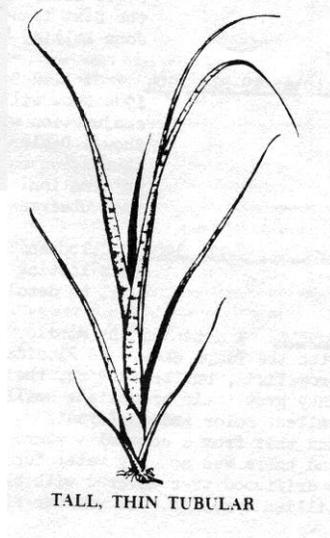
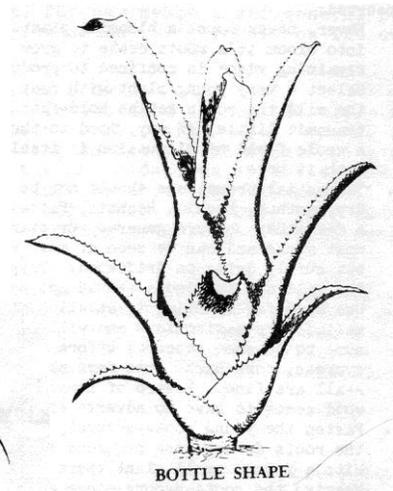
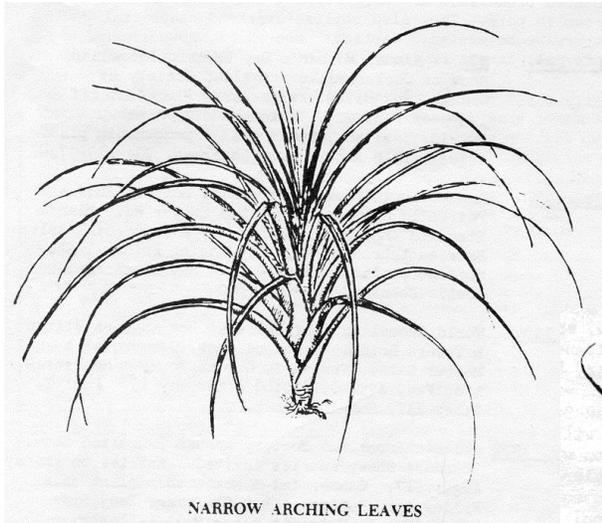
[A Thirty Year Round Trip – The Threat to the Fakahatchee by Olan Ray Creel](#)

[Florida’s Native Bromeliads – Imperiled by Exotic Evil Weevil by Dr. Howard Frank](#)

Blast from the Past:

Descriptive Terms of Bromeliad Shapes and Growth

In Volume IV, Issue II of the FCBS Quarterly Newsletter, these pictures were published to assist readers in describing various growth habits of bromeliads. No artist is credited for these drawings. Carol Johnson was the editor.



Florida Council of Bromeliad Societies

Member Societies

Many of the members of the Council have their own websites and their newsletters are available on line. Find out what is happening and get more information about bromeliad cultivation by checking out these websites and newsletters.

Bromeliad Guild of Tampa Bay

<http://www.bromeliadguildoftampabay.org/>

Bromeliad Society of Central Florida

Does not have a website but does have an open page on Facebook.
Past newsletters are available at <http://fcbs.org> – Member Societies

Bromeliad Society of South Florida

<http://www.bssf-miami.org/>

Caloosahatchee Bromeliad Society

Past newsletters are available at <http://fcbs.org> – Member Societies

Florida East Coast Bromeliad Society

Newsletters are available at <http://fcbs.org> – Member Societies

Florida West Coast Bromeliad Society

<http://floridabromeliads.org/>

Gainesville Bromeliad Society

<http://www.gainesvillebromeliadsociety.org>

Newsletters are available at <http://fcbs.org> – Member Societies

Sarasota Bromeliad Society

<http://sarasotabromeliadsociety.org/index.php>

Seminole Bromeliad and Tropical Plant Society

Contact and meeting information available at <http://fcbs.org> – Member Societies

2014 Calendar of Events

July 12

Florida Council of Bromeliad Societies' Quarterly Meeting

Florida East Coast Bromeliad Society, host

August 16-17

Seminole Bromeliad and Tropical Plant Society Sale

The Garden Club of Sanford (on 17-92, one block south of Lake Mary Blvd)

9:00 - 4:00

In air-conditioned building. Huge selection of bromeliads in many genera, orchids, aroids, ginger, other tropical plants, gift baskets, hand crafted slat baskets in several sizes. Members will be available to answer your questions.

October 11

Florida Council of Bromeliad Societies' Quarterly Meeting

Florida West Coast Bromeliad Society, host

FCBS State Roster

The annual roster of bromeliad society members will be published and mailed in August. Susan Sousa has taken over the management of the roster.

Make sure that your contact information (name, address, telephone number and email address) is current with your society. Whoever is responsible in your society for keeping membership records should send all changes and corrections to Susan at susansousa1@yahoo.com by July 19.

Contact Susan for any questions you have about format.

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**Thank you, Bromeliad Society of Central Florida
For hosting the April Quarterly Meeting of the
Florida Council of Bromeliad Societies**

**Next Florida Council of Bromeliad Societies Quarterly Meeting
July 12
Florida East Coast Bromeliad Society, host society**

**Next Florida Council of Bromeliad Societies Newsletter
August 2014
State Roster Edition (printed)**