

FLORIDA WEST COAST BROMELIAD SOCIETY

1954-2021

Celebrating over 67 Years in Bromeliads



September 2021 Newsletter

NEXT MEETING

Date & Time: Tuesday, September 7, 2021; 7:30 pm
Location: Good Samaritan Church
6085 Park Boulevard
Pinellas Park, Florida 33781

We will once again hold a regular, in-person meeting at our usual meeting location and time. The church's conditions for use of the meeting hall will remain the same until further notice and are as follows. We must limit the number of people, must wear masks regardless of vaccination status, and must sanitize the tables and chairs at the end of the meeting. We will also continue the policy of no shared refreshments but will have available some packaged snacks and individual bottles of water and soda. Otherwise, our meetings will be conducted as a typical meeting, with Show and Tell, Raffle Table, and Friendship Table.

SEPTEMBER PROGRAM

Dennis Cathcart, FWCBS member and owner of Tropiflora Nursery in Sarasota, will be the speaker with a presentation titled *Cloud Forests of South America*. He will give us a view of an environment not commonly visited or observed and which is characterized as moist forests created by persistent fog or seasonal cloud cover, with reduced available sunlight and cool mean temperatures. Cloud forests are both temperate and tropical and provide habitats for species of plants and animals not found anywhere else.

Dennis has over 40 years of experience as a collector and grower of exotic plants, primarily bromeliads. He has made over 100 collecting trips to more than 27 countries in Latin America, the Caribbean, Southeast Asia, Africa, and elsewhere. He has collected and introduced many new species of bromeliads to science and cultivation. Three species, one in each of three genera (*Aechmea*, *Neoregelia* and *Vriesea*), are named *cathcartii* in his honor.

He and his wife Linda established Tropiflora Nursery in 1976, about the same time they joined our bromeliad society. The nursery specializes in rare and exotic plants, featuring bromeliads, and includes orchids, cycads, caudiciforms, succulents, ferns, palms and more. It is said that Tropiflora has the largest variety of bromeliads available in the USA, especially the genus *Tillandsia*.

LAST MEETING HIGHLIGHTS

AUGUST PROGRAM

Alton Lee talked about *Bromeliads 101: A to Z* (subtitle: *All the Basics*), a brief overview of bromeliad growing conditions. He began the talk by noting that Christopher Columbus introduced New World bromeliads to the Old World when he brought a pineapple back to Spain on a return voyage. In this regard, one might consider him the ‘father of bromeliads’, at least in the Old World. At that time, the pineapple was called *piña de Indes*, meaning "pine of the Indians". Over the next century or so, the pineapple spread throughout Europe. It was difficult and expensive to grow, requiring the warmth of a greenhouse in a temperate climate zone. It was therefore much prized as a symbol of status, and the wealthy would put them on display at dinner parties, rather than eat them. Thereafter, the pineapple evolved into a symbol of welcome and hospitality.

Alton then paid a brief tribute to Mulford Foster (1888—1978), who has been called the ‘Father of the Bromeliad’ for his efforts in the discovery and introduction of many new bromeliad species and hybrids. He is especially relevant to us in Florida where he spent the last five and half decades of his life building a showcase collection of bromeliads and pursuing his devotion to bromeliads and other tropical plants. More about his history and contributions to the world of bromeliads is discussed in the *This and That* section below.

Alton then moved on to the core subject of his presentation, general bromeliad cultivation and growing conditions tips, which are summarized below.

Soil: Whatever you use, be sure it will drain well. A typical mix that will provide good drainage would be soil, perlite, and small-size mulch and charcoal chips.

Water: Allow the soil mix to dry out between watering and never over-water.

Light: While some bromeliads thrive in full sun, most respond best to bright morning sun conditions. In the winter be aware that some bromeliads will need to be moved about the garden to get more light as the sun dips to the south.

Temperature: The ideal temperature range for most bromeliads is 60 to 90°F.

Fertilization: Bromeliads will achieve maximum benefit when fertilized regularly. Apply fertilizer in the summer rainy season when the plant is in a growth mode and rain tends to drain nutrients from the soil. Do not fertilize in the winter, when the plants are resting and not growing. As a rule of thumb, stop fertilizing at Thanksgiving and start again in late February or March, depending on temperatures. Time release fertilizers provide a steady release of nutrients to the plant, do not have to be applied weekly or monthly, and do not tend to leach out of the soil mix. One can also fertilize with a foliage spray such as Ferti-lome™ an all-purpose fertilizer that comes in a powder form that is mixed with water. This requires weekly or monthly application.

Disease and Pests: While bromeliads are not prone to diseases, they are bothered by some pests, most commonly white or black scale, a sucking insect that attaches to the leaves. They do not kill the plants but are unsightly. They can be removed by spraying the plant with a watered-down alcohol solution and then wiping it off. One can also use a systemic pesticide

but that is an undesirable approach in consideration of its negative impact on the environment. To reduce the likelihood of scale development, plants should be spaced in a manner to allow sufficient air circulation between and around them. Another pest is the mealy bug, but these insects are typically consumed, and thus controlled, by other insects in the garden. As for the invasive Mexican bromeliad weevil, that is a topic for a longer discussion someday.

SHOW AND TELL

- Dick Dailey *Neoregelia* 'Hannibal Lector' hybrid (picture below)
Karen Mills *Tillandsia* wreath (picture below)
Molly Mines *Tillandsia xerographica* cluster (picture below)

SHOW AND TELL PLANTS



Neoregelia 'Hannibal Lector'
hybrid



Karen Mills with her
Tillandsia wreath



Tillandsia xerographica

THIS AND THAT

Mulford Foster (1888-1978)

Mulford Foster, the "Father of the Bromeliad", was a man of many talents--naturalist, horticulturalist, landscape architect, explorer, writer, photographer, and artist, but he is best known to most of the world for his pioneering work in bromeliads. Born in New Jersey in 1888, he had a love for nature, gardening, and reptiles in his childhood years. Following his graduation from college with a business degree, he worked in the banking industry for about five years and then became a newspaper editor. In 1911 he bought a large piece of property in Pennsylvania where he segued into raising fruits and vegetables while enlarging a collection of reptiles. Soon recognized for his knowledge of nature and reptiles, he began lecturing at schools and colleges.

In 1923 he moved to Florida to pursue his passion for growing and designing gardens and was employed at the Exotic Gardens in Palm Beach, the beginning of his career as a well-known and respected landscape architect. Not long after the move, he discovered bromeliads, which were essentially unknown to plant enthusiasts, and he devoted the rest of his life to collecting, growing, and hybridizing them and lecturing and writing about them. He also collected other tropical plants, such as cacti, orchids, and palms.

In 1953 he and his wife Racine purchased 12 acres of north of Orlando and named the property "Bromel-La" where they built a house and several large greenhouses. During the subsequent 20 years that they owned the property, it became a showcase for the many types of plants he collected along with the bromeliads he hybridized. He also established Tropical Arts Nursery in what is today downtown Orlando.

In the mid-1930s he made the first of many botanical exploration trips he would take over the next two decades to numerous South American and Caribbean countries and Mexico. During these trips he collected thousands of herbarium specimens and sent them to Lyman Smith, botanist and taxonomist with the Gray Herbarium of Harvard University and the Smithsonian Institution Department of Botany. Along with the specimens, Foster also sent his field notes, photographs, and paintings he had made of the plants in their native habitats that Smith then used to identify, describe, and classify the specimens. Foster also collected thousands of seeds and live plants that he brought back to the US for cultivation.

Foster's wife accompanied him on his some of his trips, working as an assistant collecting and taking field notes, and she became integral to his work. In the 1940s they began writing about their trips and what they had learned about bromeliads for various garden and horticultural publications such as *The Smithsonian*, *The New York Times*, *House Beautiful*, and *National Geographic*. They also wrote collaborative books based on their travels to South America, including *Brazil*, *Orchid of the Tropics*.

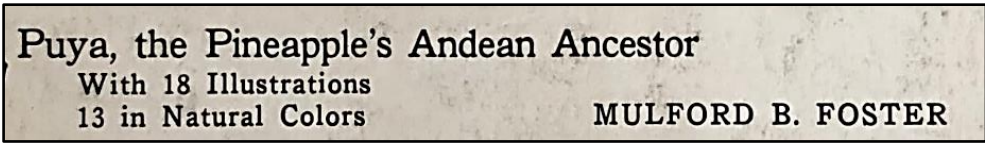
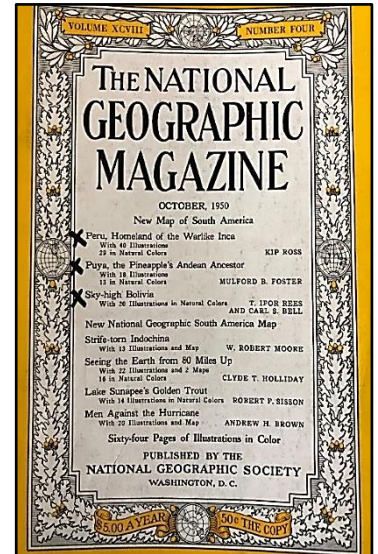
Foster's work contributed extensively to the knowledge and promotion of bromeliads and had substantial influence in the world of bromeliad growers. It is estimated that he found and collected from 170 to 200 new bromeliad species. One of the species he discovered in Brazil is the well-known *Aechmea orlandiana*, which he named after the city of Orlando where he lived. Many bromeliad species are named for him (typically as *fosteriana*) as well as the genus *Fosterella*. The genus *Racinae* is named for his wife Racine. He was one of the co-founders of the Bromeliad Society International established in 1950 and served as its first president. He was also the first editor of the BSI Journal for which he wrote numerous articles.

Foster's work is preserved at the University of Central Florida (UCF) in the Michael A. Spencer Bromeliad Research Collection that is part of the BSI Archives maintained at UCF. The Spencer collection consists of Foster's correspondence, publications, notebooks, drawings, research materials and memorabilia, along with those of his wife. One can access the archives on-line with this link: <https://archives.falsc.lyrtech.org/repositories/14/resources/448>.

Following his death in 1978, a memorial fund was established at the Marie Selby Botanical Gardens in Sarasota, Florida, as the Mulford B. Foster Bromeliad Identification Center, which is now the Mulford B. Foster Bromeliad Research Center (BRC). The research center's goals are to support the study of bromeliads and serve as a resource of bromeliad information for the public. The BRC is supported financially by the BSI along with other bromeliad societies and institutions.

“Puya, the Pineapple's Andean Ancestor”

Among Mulford Foster's writings is an article titled “Puya, the Pineapple's Andean Ancestor” published in the October 1950 issue of the *National Geographic* (then known as *The National Geographic Magazine*). [Editor's note: My husband Brian and I found a copy of the 1950 issue, pictured on the right and below, among the many boxes of *National Geographic* magazines we have that we are now discarding, keeping only select ones. This one had been his mother's copy.]



In the article Foster summarizes his 1948 trip to see—in person and in its native habitat—the bromeliad *Puya raimondii*, a species discovered in 1879 by Italian botanist Antonio Raimondi for whom it was named. This species was found in only three locations, two in Bolivia and one in Peru. Foster visited the two Bolivian sites where he photographed the plant in color and recorded it on motion picture film, the first person to do so. He also collected samples from parts of the plants for herbarium specimens.

The first location he traveled to is on the eastern side of the Bolivian Andes mountains, about 8,000 feet above sea level. There, in an arid, barren, and rocky setting with very little vegetation, he found a solitary *Puya raimondii* specimen and no traces of any others around it. How and why it grew there as a single plant was a puzzle because in the other two known locations they grew in clusters of large numbers.

Foster called *P. raimondii* 'largest of all bromeliads in the world' and reported they would grow about 10 feet high with a 20-foot-tall stalk, were about 8 feet in circumference, and had branches (leaves) about 18 inches long. He added that the stalk was covered with up to 8,000 waxy white flowers that contained millions of seeds and that would take almost 150 years to bloom. [Note: Today's literature reports that a single plant has 12,000 to 15,000 flowers on it and grows to be up to 100 years old.] Because of the plant's size, Foster and his crew stopped at a fire station in a village near the plant's location where they borrowed a ladder to use to reach the flowers on the stalk.

On the right is a color picture Foster took of the plant for the *National Geographic* article.

When a local went back to the site several months later, he saw that the plant had been burned, before the seeds had ripened. It turns out that the local indigenous population had long before discovered that when they set the plant on fire, the dry seeds would blaze and shoot flames 50 feet into the air. This was effectively their version of fireworks that they enjoyed at festival times.

Foster then traveled to the second Bolivian location where species *Puya raimondii* was found, near Lake Titicaca that straddles the border between Peru and Bolivia in the Andes mountains. At an elevation of about 12,000 feet above sea level he found a cluster of about 400 of the species, 40 of which were in bloom. There were no trees at this altitude, only some mosses, short grasses, an occasional cactus, lupine, and miniature shrubs.



Puya raimondii

Foster's article went on to discuss general aspects of other species in the genus *Puya*.

- They grow primarily in the Andes mountains, with a few species in Costa Rica, Colombia, British Guiana [now Guyana].
- *Puya* is the oldest bromeliad genus. Foster theorized that the genus originated as plants growing in swamps along the western coast of South America that adapted to living at higher elevations as the area was gradually uplifted to form the Andean mountain range.
- They are terrestrial and most are large plants.
- They grow in dry, cold areas at high elevation, none below 7,000 feet.
- They are pollinated by birds and have dry, winged seeds that are dispersed by the wind.
- Indigenous people in Ecuador use the sugary center of *Puya hamata* to make a drink called 'Juice of Red Water' and they eat tender shoots from the stiff foliage.
- The curving leaf spines of *Puya chilensis* are used to make fishhooks.
- The species *Puya fosteriana* was named for Foster who discovered it in Bolivia growing at an altitude of 14,000 feet.

Foster also reported on other bromeliads he identified on the trip—*Guzmania*, *Bromelia*, *Neoregelia*—and other plant types and noted how the vegetation changed as the altitude changed. He included a bit of a travelogue, discussing the indigenous people he met, their heritage, what they ate and wore, and the types of jobs they could find at the high altitudes where they lived. He also stated, now 70 years ago, that it was clear *Puya raimondii* was endangered by human activities and suggested a national park be established to protect them.

IN THE GARDEN

Barb Gardner



Neoregelia compacta



Neoregelia wilsoniana



X Canmea 'Jaspe'



Aechmea 'Burning Bush' (Aec. fulgens x

Peggy Goodale



Neoregelia 'Manoa Beauty'

Linda Sheetz



Tillandsia 'Houston' (*Til. stricta* x *recurvifolia*, formerly *Til. meridionalis*)

BROMELIAD AND OTHER PLANT EVENTS, 2021-2022

September 11, 2021, Bromeliad Bash

USF Botanical Gardens, Tampa, FL, 9 am to 2 pm
(<https://www.usf.edu/arts-sciences/botanical-gardens/>)

October 9-10, 2021, USF Botanical Gardens Fall Plant Sale **TENTATIVE**

USF Botanical Gardens, Tampa, FL
(<https://www.usf.edu/arts-sciences/botanical-gardens/>)

June 7-11, 2022, 24th World Bromeliad Conference, *The Big Show*, Sarasota, FL

Celebrate BSI's 70th anniversary, Hyatt Regency Hotel, Sarasota
(<https://www.bsi.org/new/conference-corner/>)

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