

FLORIDA WEST COAST BROMELIAD SOCIETY

1954-2020

Celebrating over 66 Years in Bromeliads

fwcbs.org



November 2020 Newsletter

NEXT MEETING

Date: Tuesday, November 3, 2020 CANCELLED

Our monthly meeting has been cancelled again due to the ongoing health concerns associated with the COVID-19 epidemic and the continued closure of the church campus where we meet.

HIGHLIGHTS

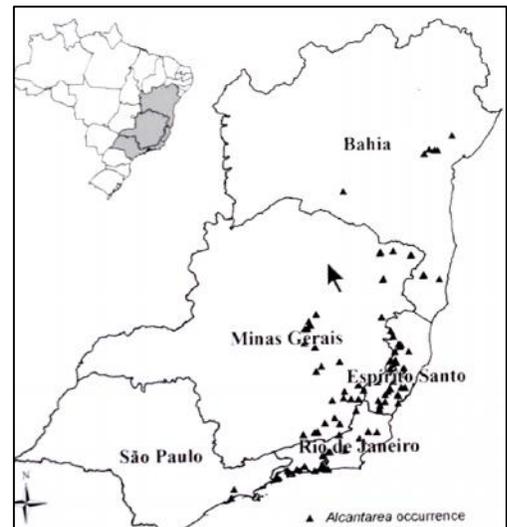
This issue of our monthly newsletter features the genus *Alcantarea*. It is based on a program titled *Alcantarea: Giant Bromeliads from Brazil* presented by Dr. Leonardo Versieux for the October 12, 2020, Zoom meeting held by the San Diego Bromeliad Society. Dr. Versieux is a Professor of Botany at the Federal University of Rio Grande do Norte in Natal, Brazil, where he concentrates his research in the area of systematics (the relationships between plants and their evolution), taxonomy, and morphology, with emphasis on the family *Bromeliaceae*. He has published 23 species of bromeliads, plus two new bromeliad genera. He is also a research associate at Marie Selby Botanical Gardens in Sarasota, Florida. Dr. Versieux graciously gave permission to use information and pictures from his talk for this article.



Leonardo Versieux

In 2015, Dr. Versieux co-authored *Bromélias Gigantes do Brasil*, the first book dedicated to the genus *Alcantarea*. It was published in Brazil in Portuguese and due to its popularity, an expanded version entirely in English, titled *Alcantarea: Giant Bromeliads from Brazil*, will be published by the end of this year. Further details about this book and how to acquire it are described at the end of this article. The pictures in this article are from the new book.

The genus *Alcantarea* is endemic to southeast Brazil's Atlantic Forest (Mata Atlântica in Portuguese) and a few species occur inland in the grasslands on rocky soils (Campos Rupestres in Portuguese), predominately in the states of Minas Gerais and Espírito Santo. These are shown on the map on the right; the triangles indicate municipalities where there are occurrences of *Alcantarea*. The Atlantic Forest is characterized by a high biodiversity and endemic species, many of which are threatened with extinction. In this area, *Alcantarea* have colonized on inselbergs and in rocky fields. Inselbergs,



from German meaning 'island mountain', are granitic, steep-sided, dome-shaped features that rise from a gently sloping or virtually level surrounding terrain (pictures below). In southeast Brazil they range in elevation from about 650 feet to about 2,600 feet.



Inselberg, Brazil



Inselberg covered with *Alcantarea*

Environmental conditions are harsh on the inselbergs and rocky outcrops: there is little or no soil, evaporation rates are high, there is low water availability, and rock surfaces can reach nearly 150°F (65°C). Yet, under these harsh conditions, *Alcantarea* has adapted to life there. For example, they are saxiculous, meaning they grow among or attached directly to the rock surface (pictures below), they have the ability to hold a large volume of water, up to 10 gallons, in their rosettes, and their leaves have adapted specialized anatomical characteristics.



Alcantarea on rock surfaces and rocky outcrops; left to right: *A. patria*, *A. cerosa*, *A. turgida*

Inselbergs and fragmented rocky outcrops form isolated and unique habitats that result in a very rich biodiversity and an evolution of endemic species not found elsewhere. This species diversification is similar to what we have seen occur in other isolated habitats, such as the deeply incised valleys in the southern Andes Mountains and the tepuis (isolated, flat-topped 'table mountains') in the Guiana Highlands in Venezuela and western Guyana.

Growing among *Alcantarea* in southeastern Brazil is a newly described bromeliad genus, *Waltillia*, which has only one species, *W. hatschbachii*. This species was originally classified as *Vriesea*, then *Alcantarea*, and then in 2017 it was moved to the newly created genus *Waltillia*.

Threats to *Alcantarea* and *Waltillia* habitat conservation include fire, invasive species, collecting for horticulture, mining for granite, rock climbers, and grazing. Modeling by Dr. Versieux and others has shown that climate change also impacts the distribution of these two genera, now and in the future. Indications are that both genera will be nearly extinct in their natural habitat by the year 2070 due to loss of environmental suitability, whether or not actions are taken to reduce the global increase in temperature.

The genus *Alcantarea* is named for Dom Pedro d'Alcântara (1875–1940), the second and last Emperor of Brazil. It is related in a broad sense to the genus *Vriesea* and the history of its name has an inconsistent taxonomy. The first *Alcantarea* was described in 1825–1827 as *Tillandsia regina* (today often confused with *A. glaziouana* and *A. geniculata*). In 1882, *Alcantarea regina* was reclassified as *Vriesea regina* and in 1889 the name *Alcantarea* was first published, although not as a genus but as a subgenus of *Vriesea*. In 1929–1930, *Alcantarea* was raised to genus level, then back to a *Vriesea* subgenus, and in 1995 it was resurrected as a genus, which it remains today.

According to Dr. Versieux, the study of *Alcantarea* is important for a number of reasons.

- The extent of their native habitat is limited. They are almost entirely endemic to the Brazilian Atlantic Forest and their habitat conservation is threatened.
- They are inadequately and poorly represented in herbaria collections. In addition, the pressed and dried herbarium specimens are hard to describe, and the large size of *Alcantarea* does not lend to itself to a complete dried specimen.
- They have a horticultural importance and a likely epidemiological importance. The large volume of water contained in their rosettes attracts mosquitoes, which can spread disease.
- More knowledge about them will help conservation and maintenance of biological diversity.
- There remain many inselbergs where *Alcantarea* occurs that have yet to be explored.

General physical characteristics and growing conditions of *Alcantarea* include the following.

- Size: While *Alcantarea* is typically a large plant, not all are large. They range in height from 1.5 feet to 15 feet high and in width from 3 to 5 feet.
- The genus has well developed tanks, short to long stems, and spectacular inflorescences up to 8 feet tall (example shown in the picture on the right, with Dr. Versieux for scale).
- Pollination: While many, such as *Alcantarea regina*, have nocturnal flowers that are pollinated by bats, most bloom in the daytime and can be pollinated by up to 11 species of birds and insects such as bees and butterflies.
- Flowers: Flowers are usually large and showy with long petals and mucilage, which is a thick, gluey substance. Flower petals are white, reddish, or yellow, and the latter are fragrant.
- Seeds: Seeds have feathery appendages on both ends, typically dispersed by breezes.
- Pups: They produce two types of pups: grass pups (thin, grass-like leaves) at the base of the plant and regular pups that attach inside the rosette leaves in the leaf axil. Pups



can be removed when they have more than five leaves and some roots, which is best in warm months.

- Light: In nature most grow in full sun but some species tolerate and grow in partial shade on rocky outcrops, and in forest patches.
- Temperature: They can tolerate temperatures down to 32°F and light frost.
- Cultivation: They prefer a free-draining mix to maintain healthy roots; too much water can kill them.

There are currently 43 recognized species of *Alcantarea*, 40 that have been previously published and three new species that will be described in the new *Alcantarea* book. There are 61 cultivars formally registered in the Bromeliad Society International (BSI) Bromeliad Cultivar Register (listed on this website: <http://registry.bsi.org/?genus=ALCANTAREA>).



Variegated forms (examples on the left; photos by John Byth) can be found growing in habitat from seed germination and have been used to propagate asexually. These are stunning plants and much sought after by collectors.

While most species are green, species *imperialis*, *vinicolor* and *turgida* and many hybrids (examples on the right; photos by John Byth) are a strong red-wine color when grown in full sun.



Alcantarea is a good choice for use in the landscape, as shown in the pictures below. They are versatile and sturdy, and their large size and colors make a great visual affect. They grow best when planted where they will receive at least four hours of sunlight each day.



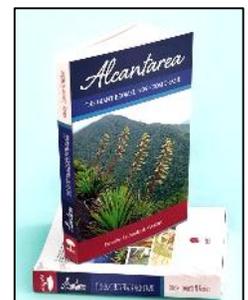
Photo by J. Tabacow



Photo by R. Smythe

Alcantarea: Giant Bromeliads from Brazil

The new book *Alcantarea: Giant Bromeliads from Brazil* (pictured on the right) edited by Dr. Versieux is the result of the collaboration of 14 researchers and horticulturists from around the world. It has 270 pages, 50 of which are color photos of species and their structures. The seven chapters include line drawings, maps, new species descriptions, history,



and conservation status of each species described. The picture on the right is one of the new species described in the book.

The book was partially funded by the Harry E. Luther-Victoria Padilla BSI Fund established at Marie Selby Gardens through the BSI. Proceeds from the book sales go toward protection of and research into Brazil's Atlantic Forest. The book is currently available at a special pre-publication price of US\$39.00, which includes postage. Published in Brazil, it is expected to be ready for shipment in December, 2020. Contact Dr. Leonardo Versieux, the book editor, for additional information at his email address: Lversieux@yahoo.com.br. It can be purchased via PayPal to his email account.



THIS AND THAT

2021 Officers and Membership Dues

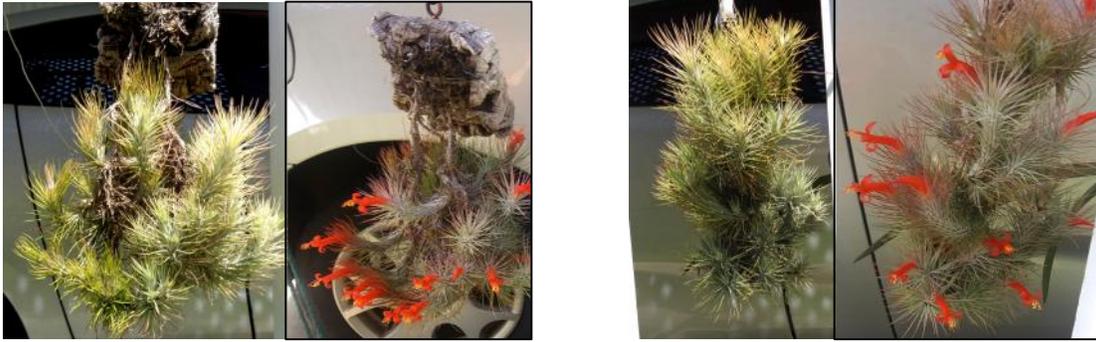
In consideration of continuing interruptions to our meetings caused this year (and likely into next year) by the coronavirus, our Board of Directors voted in favor of two proposals. First, forego the annual November election of the next year's officers and retain the current ones through 2021. (The current officers would agree to remain in their positions through 2021.) Second, membership dues paid for 2020 would be carried over through 2021 and current members would not be required to pay dues again until January 2022. These motions were approved by members who responded by email with their vote.

IN THE GARDEN THIS MONTH



Portea fosteriana, left to right: mature bloom stalk, bloom close up, and immature bloom stalk

Bill Schumacher submitted the pictures below of two clumps of *Tillandsia funkiana* (before and after blooming). He started them from three single stems the late Helga Tarver gave him about 10 years ago. (Patience is a true virtue when waiting for some bromeliads to multiply.)



Bill Schumacher's two clumps of *Tillandsia funckiana*, before and after blooming

Barb Gardner submitted the pictures below of her *Billbergia* 'Mahogany and Ivory', a Ben Sill hybrid. She notes that the flowers are chartreuse-green with blue tips.



Barb Gardner's *Billbergia* 'Mahogany and Ivory' (*Bil.* 'Manda's Othello' x *Bil.* 'Pixie')

BROMELIAD AND OTHER PLANT EVENTS, 2020--2021

2020

November 21-22 (9am-4pm), Edison Fall Garden Festival

Edison and Ford Winter Estates, 2350 McGregor Boulevard, Fort Myers

(<https://fortmyers.floridaweekly.com/articles/edison-and-ford-estates-hosts-annual-fall-garden-festival>)

December 5 (9am to 5pm) & 6 (9am to 4pm), Caloosahatchee Bromeliad Society Sale

Edison and Ford Estates, 2350 McGregor Boulevard, Fort Myers

(Larry Giroux, 239-850-4048)

2021

March 26-28, Tropiflora's 21st Annual Spring Festival

Tropiflora Nursery, 3530 Tallavast Road, Sarasota, 941-351-2267

(<https://tropiflora.com/pages/events>)

April 10-11, USF Botanical Gardens Spring Plant Sale

University of South Florida, Tampa, FL (<https://www.usf.edu/arts-sciences/botanical-gardens/>)

June 8-12, 2021, 24th World Bromeliad Conference, *The Big Show*

Celebrate BSI's 70th anniversary, Hyatt Regency Hotel, Sarasota

(<https://www.bsi.org/new/conference-corner>)

2020 FWCBS BOARD OF DIRECTORS

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|--------------------------|--|
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