

# *Journal of The Bromeliad Society*



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# Journal of the Bromeliad Society

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**Cover photographs. Front:** *Tillandsia* 'Silverado', cultivar of a cross made by John Arden between *Tillandsia chiapensis* and *T. xerographica*. Photograph by Pamela Koide. **Back:** *Pitcairnia* 'Beaujolais' a hybrid between *Pitcairnia rubronigriflora* and *P. smithiorum*. The hybridizer was Jim Irvin. Photograph by Jim Irvin.

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## Bromeliad Cultivars: The Millenium Ellen Baskerville

One of the great joys I experienced after becoming Cultivar Registrar in 1992 was talking with hybridizers about their plants and encouraging them to make a public record of their creative efforts through formal registration. Increasing registrations was one of my main objectives after I became Cultivar Registrar. The bromeliad world has been fortunate to have many conscientious hybridizers and growers over the last few years. In the six year period that I served as registrar over 250 plants were registered, a few more than had been registered during the 35-year period between 1956 and 1991.

Another objective I had after beginning the job was to revise the preliminary list every five years. However, after some study, I realized that any revision of the list would be a monstrous task. It seemed that if we were to move forward with registration, all efforts needed to be directed toward turning the "list" into a formal Registry.

Don Beadle agreed to take on this project, and I am excited that the Registry has become a reality<sup>1</sup>. Thanks to his tenacity, determination and penchant for thoroughness, this new, expanded source of information became available for the first time at the Houston World Conference in July 1998.

The Bromeliad Registry was the most recent step in the evolution of a pioneering effort begun to present historical information, catalog, describe, photograph and register the cultivars of the Bromeliaceae. This effort first began in the sixties when the Bromeliad Society International (BSI) applied to become an International Registration Authority (IRA). In 1979, the first checklist of hybrids was compiled by Victoria Padilla, long-time editor of the *Journal*. In 1991, Don Beadle compiled "A Preliminary Listing of All Known Cultivar and Grex Names for the Bromeliaceae." These two "lists" form the foundation for the Bromeliad Registry. As we approach a new century, it seems appropriate to view the Registry as setting the stage and direction for formal registration.

Hopefully, everyone who has participated in the formal registration process by filling out forms and sending in photographs feels a sense of accomplishment by his contribution to our knowledge of the Bromeliaceae. I extend sincere thanks to those hybridizers mentioned here along with John Anderson, Wally Berg, Bob Spivey, and Ulrich Baensch for "keeping me in business." Thanks are also due to Chet Blackburn for patiently accepting my eleventh hour notations, and Harry Luther, Edna Sieff and Bruce Holst, for guiding and serving as my botanical gurus. Most especially, to Don Beadle, I offer my deep appreciation and thanks for the tremendous effort and expertise he expended in making the Bromeliad Registry possible.

<sup>1</sup> Available through BSI Publications, 6523 El Camino Real, Carlsbad, CA 92009.





Figure 1. Photograph by Anne Collings

*Neoregelia* 'Milagro', a cultivar registered by R. L. Frasier. Pictured plant from the collection of Joe and Peggy Bailey.



Figure 3. Photograph by Ellen Baskerville

*Neoregelia* 'Pimiento'. A Chester Skotak cultivar.



Figure 2. Photograph by Ellen Baskerville

*Neoregelia* 'Johnny Cayenne' by R. L. Frasier.



Figure 4. Photograph by Ellen Baskerville

*Neoregelia* 'Takizawa Princeps' by R. L. Frasier.

What is left to do now is to introduce you to some new cultivars and their creators. Since, as Cultivar Registrar, it was not appropriate for me to make value judgments about new registrations, (that is, I'm not supposed to oooh! and ahhh! and exclaim and speak in superlatives). Instead, I wish to present a few photographs of some of the cultivars registered since 1991, and let the photographs speak for themselves.

Carol Johnson of Pineapple Place in Longwood, Florida was kind enough to register many of Gary Hendrix's crosses of miniature neoregelias. Gary gave us the plants and Carol gave us the names such as *Neoregelia* 'Tar Baby,' 'Cheers,' 'Domino,' and 'Angel Face.'

Jim Irvin of Cape Coral, Florida, when he is not creating cryptanthus cultivars, is also trying his hand with *Pitcairnia*, *Billbergia* and miniature *Neoregelias*. He has given us *Billbergia* 'Cold Fusion,' *Pitcairnia* 'Beaujolais' and 'Pinot Noir,' *Neoregelia* 'Mo' Peppa' Please' and a brand new bigeneric named  $\times$ *Pitinia* 'Coral Horizon', a cross between *Pitcairnia rubronigriflora*  $\times$  *Pepinia corallina*. A new cultivar that did not quite make the printer's deadline for the Registry is *Neoregelia* 'Carol Johnson,' a cross between *Neoregelia* 'Angel Face' and *johannis*.

Dr. Samuel Smith of Fort Myers, Florida, has given us cultivars of *Aechmeas* such as *Aechmea* 'Caloosa,' 'Peggy Joe,' 'Fascimore,' 'Jack,' 'Jimmie Knight,' and 'Julie Sewell.'

From California, John Arden continues his hybridizing of vrieseas and tillandsias. His newest efforts are *Tillandsia* 'Amigo,' 'El Primo,' 'Sea Urchin,' and 'Silverado.' vrieseas include 'Aztec Gold,' 'Mirage,' 'Sundance,' and a bigeneric  $\times$ *Vrieslandsia* 'Cascading Flame.'

A newcomer to registration is David Shiigi of Hilo, Hawaii, who sent in registrations of his many vriesea and neoregelia cultivars. They are listed in the Registry.

Currently from Austin, Texas, and formerly of Costa Rica, R. L. Frasier has registered many neoregelia crosses that he and his friend Chester Skotak have made since they were students together at Texas A&M. I have known R.L. for thirty years. In fact, he gave me my first bromeliads in 1967; *Billbergia* 'Pixie,' and *Tillandsia ionantha*. One day many years ago, he called to say that he and Chester had a variegated *Neoregelia* that, when used in crosses with other plants, produced variegated seedlings. I thought this was rather revolutionary, and now many years later, "Skotak hybrid" has become a bromeliad "greenhousehold" word.

I talked to R.L. recently and asked him to give me some history of this famous variegated *Neoregelia*.

It all began when the late Ed Peterson and Colin Seale, bromeliad and orchid growers in Austin, Texas, made one of their many visits to Puerto Rico. On

one occasion, they brought back a variegated *Neoregelia* 'Meyendorffii' they had purchased from Señor Alejandro Santiago. R. L. saw the plant in his collection and purchased it. He enjoys hybridizing *Neoregelias* and *Tillandsias*, and this time, he had found a real winner in this variegated parent. Many cultivars have been produced from that original plant. The original plant was later lost when tainted fungicides destroyed so many bromeliads, but some of the offspring still carry the ability to produce variegated plants from seed. Some of these are *Neoregelia* 'Pemiento,' 'Crayola,' 'Luna,' 'Lorena,' and 'Mosquito.' Another cross between *Neoregelia pendula* and *rosea* (an *eleutheropetala* type) has been registered as *Neoregelia* 'Morona' and is found in many collections. The newest of his registrations (1998) are *Neoregelia* 'Goode for Grace,' 'Johnny Cayenne,' 'Lou Wilson,' 'Milagro,' and 'Takizawa Princeps.'

These are certainly not the only cultivars introduced over the last six years, nor were these hybridizers the only ones that have been active during that period. They were, however, the most active in registering their hybrids and for that I would like to thank them, both personally and on behalf of the BSI. Their contributions helped make my job as Cultivar Registrar the exciting and pleasant job that it was.

Sarasota, Florida

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## New Address for BSI Publications

Certainly one of the most conscientious and hard-working individuals over the past few years has been Publications Chairperson Sally Thompson. Unfortunately, she is no longer able to continue in that capacity because of other commitments. The BSI board of directors has appointed Pamela Koide to replace her. The BSI would like to thank Sally for her years of exceptional service and to further thank Pamela for filling the void.

Effective immediately, the address for ordering publications from the BSI is:

Pamela Koide  
BSI Publications  
6523 El Camino Real  
Carlsbad, CA 92009  
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Phone: (760) 438-9393.  
E-mail: [publications@bsi.org](mailto:publications@bsi.org).





Figure 5.  
*Guzmania sieffiana* flowering at  
Marie Selby Botanical Gardens.  
Photo by Vern Sawyer



Figure 6.  
A portion of the inflorescence  
of *Guzmania Sieffiana*.  
Photo by Vern Sawyer

## Yet another new *Guzmania* from northwestern Ecuador

Harry E. Luther

Relatively few bromeliads have plicate (accordion-folded) leaf blades; a few species in *Pitcairnia* and *Pepinia*, and perhaps a half-dozen species in *Guzmania*. Most of these occur in very wet, rather shady habitats and I assume the plications give the long leaf blades additional mechanical strength. The following new species is distinctive due to its size, coloration and leaf plication.

*Guzmania sieffiana* H.Luther, sp.nov. (Figures 5 & 6.)

**Type.** ECUADOR. Esmeraldas: along the Rio Negro ca 4 km W Lita on the road to Alto Tambo, 700 m elev. *R. Determann & the Atlanta Botanical Garden legit*, flowered in cultivation 6 Mar. 1994., H. Luther s.n. (Holotype SEL; Isotypes QCA, QCNE)

A *G. stricta* L.B.Sm. affinis et similis sed laminiis foliis latioribus ramis inflorescentiae patentibus bracteis florigeris minoribus et sepalis longioribus differt.

**Plant** a lithophyte, flowering 0.6–1.0 m tall. Leaves densely rosulate, laxly spreading, 60–90 cm long. **Leaf sheaths** narrowly elliptic, 10–15 × 3–6 cm, somewhat nerved, densely appressed brown-lepidote, castaneous especially abaxially. **Leaf blades** linear, attenuate, 30–45 mm wide, with 3 to 5 obtuse plications, subdensely appressed punctate lepidote, dark green. **Scape** erect to leaning, 30–60 cm × 5–10 mm, fugaciously pale lepidote, red. **Scape bract** erect, imbricate, the lowest subfoliaceous, the upper elliptic, acute to attenuate, green. **Inflorescence** bipinnate, 30–45 × 15–20 cm with 8 to 15 branches; the branches at first evenly polystichously arranged but becoming somewhat secund pendant in late anthesis. **Primary bracts** elliptic, attenuate, 1–10 cm long, the lowest equaling the branches, the upper shorter, red with green tips or entirely red. Branches 3–12 cm long with a 1–2 cm naked peduncle, polystichously 12-to 30-flowered, spreading at 45–90° from the main axis at anthesis. **Floral bracts** elliptic, acute, 10–17 mm long, nerved, ecarinate, thin-coriaceous, yellow to yellow-green. **Flowers** with a 2–3 mm pedicel, 25–28 mm long, spreading at ca 300 from the axis, opening during the day. **Sepals** narrowly elliptic, acute, 20–22 mm long, basally connate for 4–5 mm, thin-coriaceous, nerved, the adaxial pair carinate, yellow. **Corolla** erect, semitubular, slightly spreading at the apex. **Petals** ligulate, obtuse, 26 × 3 mm, conglutinated into a tube for 10–15 mm, naked, bright yellow. **Stamens** and style included.

This new species is similar to and probably related to *Guzmania stricta* from Nariño Dept., Colombia. *Guzmania sieffiana* differs by having broader

[Continued on page 212]

## Vrieseas in an Alien Environment

Peter Huddy

Photograph by the author

Allow me to introduce you to Adelaide, a sprawling city of some 800,000 people, rambling from the foothills of the Mount Lofty range to the shores of the Gulf of St. Vincent. It is the capital city of the state of South Australia in Australia; the driest state of the driest continent on earth. We have four weather seasons per year. Winters are cool with temperatures around 9°C (48°F) during the day and 2°C (36°F) at night along with a humidity of 50-80%. Summers are hot and dry and can last for varying lengths of time, September till March or December till February. Day temperatures range from 28-42°C (82-108°F) often for long periods of time; such as 14 consecutive days exceeding 38°C (100°F). At this time the days are bright, sunny, and clear and the nights a little cooler, dropping to as low as 18°C (65°F) with humidity of 10-50%. The average yearly rainfall of 584mm falls mainly in late winter from around June until October. Winds are usually not severe but where I live winds known locally as gully winds come out of the hills during summer evenings. These blow up to 30km/h (19 MPH), with gusts to 55km/h (35mph). We also have our share of wet summer days, and although not very often, a few thunder and dust storms, but never snow. The locals have adapted to living with our water supply although I have heard stories that there are only two places in the world where cruise liners will not take on water, Adelaide and somewhere in Wales.

Compare this environment to parts of Brazil<sup>1</sup>, with lowland temperatures of 17-30°C (63-86°F), 75-95% humidity and 1-5km/h (0.6-3 MPH) winds; or its mountain environments cloudy with 12-25°C (54-78°F), a minimum of 75% humidity and 4-5km/h (2.5-3MPM) winds. There are also basically only two seasons, warm and dry, hot and wet. The comparisons make it obvious that Adelaide is not the ideal spot in which to grow my favorite group of bromeliads, the genus *Vriesea*.

After three years of experimentation I can now relate the results of how I created a mini-Brazil in my back yard. It took a lot of alterations. First, there needed to be an enclosed space, so a frame became the first requirement - one with a pitched roof that sheds water from the winter rain which can then be collected for use during hot weather. Another modification made to adjust for the local conditions was the installation of shade cloth walls to control the strong winds, and waterproof shade cloth fixed permanently to the roof frame to exclude rain. I use 50% beige so as not to exclude the winter sun. Beige seems to still provide a good quality light even on dull days. A few instruments were added to monitor conditions, including a weather station to measure temperature and

<sup>1</sup> Volume 12 - Climates of Central and South America. Elsevier Scientific. Landsberg H. E. (ed). 1976 World Survey of Climatology Publishing Co., Amsterdam B New York.

humidity, a light meter and a pH meter. An overhead pressurized rainwater spray watering system, injected with nutrients, is used to replace natural rainfall. It can be turned on at will so providing rainfall in summer is not a problem. The plants are placed on shelves while the underspace and floor below is covered with bark chips resting on a layer of plastic. Micro sprays can be initiated to raise humidity.



Figure 7.

*Vriesea fosteriana*, *Vriesea elata* and friends enjoying the little bit of simulated Brazil

Luckily a local supplier had imported a selection of fog sprays from Arizona and with these fitted inside the apex of the roof the temperature is held below 30°C (86°F) with the added bonus of raising humidity.

All that was left was to reduce the high light intensity. Obviously shade cloth was desirable, but which one? We can only gaze with envy at American advertisements with all the densities available to them. No such luxury out here. The choices available are 50%, 70% or 90% in green, black or beige or for the more daring, café-stripped. Using a light meter to aid in the decision, the selection made was 50% shade, in my situation resulting in 75% shading during October and November and in April and May. This cloth is exchanged for 70% shade cloth (85% resulting shade) for December to March. During the winter months (June-September) the waterproof roof is the only cover used.

With the use of the weather station the conditions inside can be monitored and adjusted as required. Possibly the installation of a thermometer to turn the fog sprays on and off would be an asset for times of absence, as the plants really don't like our heat.

[Continued on page 212]

## Affiliates in Action

### Gene Schmidt

The BSI would like to congratulate the newly-formed Bromeliad Society of Japan. Co-founders are Hideo Shimizu and Dr. Hiroyuki Takizawa. Dr. Takizawa was elected as the group's first President at an inaugural meeting held in Tokyo, June 21, 1998. Approximately thirty members attended the first meeting and membership is growing quickly. We wish their new bromeliad society many years of growth and success as we look forward to their affiliation with the BSI.

It is with regret that we announce that Rose Marie Buffalo is moving from our midst and relocating in the Atlanta, Georgia area. She is one of our most loyal members and a very knowledgeable Tillandsia grower. We will miss her and wish her all the best and happiness in her new home. A Certificate of Appreciation was given to her at the April meeting. Good Luck Rose Marie! (*From the May and June '98 Commentary, Bromeliad Society of Broward County, Inc.*)

The BSA mourns the loss of member Len Butt. Len joined the BSA in its first year and was still an active member at the time of his death. He was Associate Vice President of the society for many years and worked tirelessly for the Society. Len was Past Editor of 'Bromeliaceae,' the journal of the Queensland Bromeliad Society where he was a Life Member and co-founder. Len Butt will be sadly missed. (*From the July/August '98 Bromeletter, Bromeliad Society of Australia, Inc.*)

The Bromeliad Guild of Tampa Bay, FL, mourns the passing of Edith Howells, long time member and bromeliad grower. She was a BSI Master Judge and was awarded the Ervin Wurthmann Award several years ago for distinguished service to the BGTB. Edith will be greatly missed. (*From the July '98 The Newsletter, Bromeliad Guild of Tampa Bay, Inc.*)

Thanks to Len Trotman for his many contributions to the Bulletin of New Zealand. Most recently, Len has done an amazing job with his reports on the meetings, and especially his helpful hints. Over the years Len has contributed numerous articles, especially on basic guides which are so helpful to new members. Also appreciated is Len's work importing new varieties of bromeliads so growers can broaden their collections. Let's hope the bureaucrats and their regulations don't slow him down. Len is also to be congratulated on his qualification as a National Flower Judge in New Zealand by the Auckland Horticultural Council. It has taken three years to complete this course with twelve months studying at Tech and two years in the field of judging. Well done Len! (from the April '98 & June '98 Bulletin, Bromeliad Society of New Zealand, Inc.)

If you would like further information on how your local society can become affiliated with the BSI, please contact Gene Schmidt of the Affiliated Societies Committee at the address found on the inside of the back page of the *Journal*. E-mail address is GENOPS@aol.com. For more undated information on affiliated societies events and dates, please find us on the Internet at <http://BSI.org>, the BSI web site.

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## It's All in How You Look at it

### Ed Prince

The difference between an experienced, well-traveled plant enthusiast who braves the wilds of Central or South America to actually collect bromeliads (like some of the folks I know) and a normal plant enthusiast who goes to the local supermarket or nursery to buy that very same plant is about \$100 per plant.

You may ask why anyone would subject themselves to the trials and travails of field collecting; enduring delayed flights, insect bites, undrinkable water, horrendous accommodations, stifling heat, dampness, cold nights, and suffer scrapes and scratches, allergic reactions and many other discomforts all to collect the same plant that he or she could walk into an air conditioned discount store, converse in your native language, and buy for \$5.00.

I'll tell you why! Do you share my dream? Did you at one time attend a plant society meeting where the guest speaker showed slides of incredibly breathtaking waterfalls, majestic mountains, quaint villages, smiling natives, and lush forests laden with rare and desirable plants? A gripping narrative dripping with joy and adventure usually accompanies the slides that infers that you too could add your name to that somewhat limited list of international adventurers who have experienced the wonders of the wild.

That inference becomes the seed planted in the rich soil of your mind, mentally fertilized with daydreams, and inevitably produces a crop of images of newly discovered plants that might someday bear your name. The treatment for this mental malady is a simple one, but an expensive one. It can only be accomplished by going on a collecting trip yourself.

I recently read an article by that intrepid explorer and plant collector, Don Beadle. In his very well written account, Don reflects upon the beauties and wonders of a collecting trip to Mexico he had taken some years back. Don waxes eloquently about the various locals and magnificent sights of an unforgettable trip that he would very much like to repeat. It's funny what we mentally recall when reviewing our personal experiences. My thoughts when I reminisce about a collecting trip to Ecuador are, for the most part, the stuff of which nightmares are



made. Sure, there were spectacular snow-capped volcanoes, verdant mist-filled rain forests, and all those travel brochure scenes we dream about. But the incidents I first recall are the ones that are reminiscent of my first visit to the principal's office while a ninth-grader, or of sitting in a dentist's chair waiting for unknown pleasures to come.

It's not that I actually ever saw a venomous reptile, with its forked tongue gingerly testing the air just inches from my exposed ankle; or felt the tingle of those eight, hairy but delicate legs of a fist-sized tarantula that mistook my arm for a tree limb. It's just the feeling that at any moment these mental images may become physical reality. And there you are, risking life and limb, albeit mentally, in the wild of who-knows-where and for who-knows-what?

I mean, five years from now, who but a small handful of fellow bromephiles will care, or even remember for that matter, that you once followed an irresistible urge to join the ranks of previously smitten men and women of dubious mental stability.

I think you catch my drift. Before you make a commitment to make horticultural history, just make sure all your legal and financial papers are up to date and that you have no loose ends hanging about.

There's more that needs to be said but time is at a premium as I need to go out and buy a new pair of boots as I understand it can get pretty wet in the south of Panama.

Miami, Florida

## E-mail Addresses Needed for Directory

We'll try this again with this issue, and this time we'll use the correct e-mail address. Two letters were transposed in the last issue.

If you have an e-mail address which you would like to have included in the next BSI directory, please forward it to Membership Secretary Carolyn Schoenau at [BSI@nervm.nerdc.ufl.edu](mailto:BSI@nervm.nerdc.ufl.edu).

Authors submitting articles to the JOURNAL for publication are also encouraged to send their e-mail address along with the articles. They will not be published with the articles (unless the author requests it), but may be used for communicating with the author to clear up any questions, make comments, etc. The e-mail address of the editor is [blackburn@newworld.net](mailto:blackburn@newworld.net)

## *Tillandsia carlsoniae*: Profile of an Endemic Species and Its Collector

Robert Guess and Virginia Guess

Photography by the Authors

Plant collecting in the highlands of Chiapas, Mexico, is far different today than it was in 1949 when Dr. Margery C. Carlson traveled to this state on her second botanical expedition for the Chicago Natural History Museum. Accompanied by her friend and colleague, Kate Staley, the two intrepid women spent six months exploring the states of Oaxaca and Chiapas in a fully equipped jeep station wagon. Their collecting sojourn took them along the newly completed Pan American Highway from Oaxaca into Chiapas, through dense rain forests rich with unknown plant species, and on to the Mexico-Guatemala border where they ventured into the nearly inaccessible lake and forest region of Lagos de Montebello. It was on 6 April 1949 during one of their excursions between San Cristóbal de Las Casas and Comitán de Domínguez that Dr. Carlson collected a bromeliad later to be described by L.B. Smith (1959:1). Now, with the passage of almost fifty years, only a small percentage of the vast tropical rain and cloud forests of Chiapas where she once collected survives. However, the plant named in her honor, *Tillandsia carlsoniae* L.B. Smith, still can be found in oak-pine forests of the Chiapas Plateau.

*T. carlsoniae*, one of the more remarkable yet lesser known tillandsias endemic to highland Chiapas, grows at elevations ranging from 1500 to 2400 meters. The sharply tapered leaves, often 40 to 50 centimeters in length and 4 to 5 centimeters wide at their base, are covered with fine scales (trichomes) that reflect light to produce a characteristic silvery-gray color. Like many other scale-covered tillandsias, the leaves of *T. carlsoniae* lose their light reflective qualities when dampened, and the chlorophyll-bearing cells dominate the leaf color until the surface



Figure 8.

Margery C. Carlson in her early years as Professor of Botany at Northwestern University. [Courtesy of Hunt Institute for Botanical Documentation, Carnegie Mellon University, Pittsburgh, PA.]



is again dry. The leaf rosette has a distinctive arrangement in which the lower leaves droop markedly in sharp contrast to the semi-erect, spreading upper ones. This pattern facilitates identification of *T. carlsoniae* at considerable distances. Nestling in this rosette of leaves is the multi-spiked inflorescence which emerges from a very short, hidden scape.

Our observations of the inflorescence differ slightly from previous accounts that describe it as having only five to six pink, laterally flattened spikes (Smith 1959:1; Padilla 1976:84, 1981:20; Smith and Downs 1977:922). In the last few years, we have examined over one hundred plants comprising all stages of development from different highland locales. We conclude that the number of spikes is rarely in this range, but varies from a low of five to as many as fifteen with an average near eleven. This number correlates closer to the nine described by Utley (1994: t 07). In this case, more spikes are better, since the true beauty of this tillandsia comes from the soft-pink color of its floral bracts that are highlighted by small, but dramatic, violet flowers.

A variation of this species found in the same growing range exhibits a longer scape with multiple spikes elevated 8 to 10 centimeters above the cup of the rosette of leaves. The number of spikes is usually the same as in the common form, but the inflorescence appears somewhat less robust in both size and color. We have submitted a specimen to the Bromeliad identification Center at the Marie Selby Botanical Gardens for another opinion.

Although *T. carlsoniae* grows in many circumscribed areas of forests around San Cristóbal de Las Casas, it is not the bromeliad of choice for decorative use. The indigenous Indians gather it only on special occasions and thus it appears infrequently for sale in local markets. Perhaps because of the delicate hues of the floral bracts and subdued leaf color, it is often overshadowed by the more spectacular highland tillandsias, such as *Tillandsia ponderosa* and *Tillandsia guatemalensis*, with their more prominent, red, erect inflorescences. While *T. carlsoniae* reproduces by seeds as well as multiple offsets, it is still not as abundant as these other highland epiphytes. However, its prolific development of offsets often results in moderately large, isolated clumps of plants in various stages of maturation growing on high tree branches. It was a specimen of this plant that Dr. Carlson submitted to L.B. Smith for identification.

Margery Carlson, who died in 1985 at the age of 92, was a pioneering botanist and one of the few women plant collectors of her time to explore the remote forested areas of Chiapas. Born in 1892, she graduated from Northwestern University in 1916 as the first woman to major in botany, later earned a masters degree and Ph.D. in botany from the University of Wisconsin, and taught in the Department of Biology at Northwestern University for over 30 years. During these years, her five collecting expeditions to El Salvador, Honduras, Costa Rica, Guatemala, and Mexico, resulted in the discovery of numerous new species of epiphytes and other plants. Although she undoubtedly

collected many more, Smith and Downs (1974, 1977, 1979) credit her with submitting twenty-five different specimens of Bromeliaceae, nineteen of which came from Chiapas.

In 1958, Dr. Carlson retired from Northwestern University but remained professionally active as a research associate in botany at the Chicago Natural History Museum. Under the aegis of that Institution, she continued her collecting forays into Mexico. Throughout her long and active life, she was an outspoken advocate for the conservation and preservation of wilderness areas in Illinois, an advisor to the Evanston Garden Club, and a member of numerous scientific and environmental organizations. While Knobloch (1983:14) reports her death occurred in Oaxaca, Mexico, articles on her life and accomplishments provided us by Northwestern University Archivist, Patrick Quinn, verify that she died in a retirement home in Evanston, Illinois.

The delightful descriptions of her adventures remind us of a passing time in Mexico, and capture a glimpse of an environment once rich in floral diversity. Of her 1949 trip to Chiapas, she writes: "Many of the pines and oaks in the mountain forests around San Cristóbal de Las Casas are as much as a hundred feet tall and eight feet in diameter. A remarkable variety of smaller trees and shrubs forms a dense undergrowth. Trunks and branches bear ferns, orchids, and bromeliads, which live on the moisture of the clouds that gather nightly on the peaks (Carlson and Staley 1953:22)." As a resourceful collector, she made many friends among the local people who admired her tenacity in exploring unknown places under difficult conditions. Her reminiscences about her travels reveal this spirit of adventure. "We (she and Kate Staley) had been gone six months and put nine thousand miles on the jeep, not counting all the miles we had covered on foot. On our three expeditions, one to El Salvador, one to Honduras, and the Chiapas trip, we have collected almost ten thousand plants of 2,600 different species, and are convinced that nothing beats plant collecting for getting to know a country and its people. We are certain that no other gringos have been where we have been, seen what we have seen, or enjoyed Chiapas and its inhabitants as much as we have" (Carlson and Staley 1953:39).

Environmentalists project that within another fifty years, only traces will remain of the majestic tropical forests that once framed the rich collecting ground for Dr. Carlson. Despite this dire prophecy, good memories of times past continue to lure plant collectors and researchers to this region. Even now, people, endowed with the same sense of discovery and curiosity that characterized Dr. Carlson, continue to explore out-of-the-way niches in order to add to the botanical knowledge of Chiapas.

#### ACKNOWLEDGEMENTS

We wish to thank Patrick M. Quinn, University Archivist, Northwestern University Library, Evanston, Illinois, who generously provided biographical material on Margery C. Carlson from the University Archives, and Anita L. Karg, Archivist at Hunt Institute for Botanical Documentation,



Figure 9.  
Vertical view of *Tillandsia carlsoniae* inflorescence surrounded by a rosette of green leaves shortly after a rain shower.



Figure 10.  
*Tillandsia carlsoniae* with its distinctive rosette. The erect and spreading upper leaves contrast markedly with the drooping lower ones.

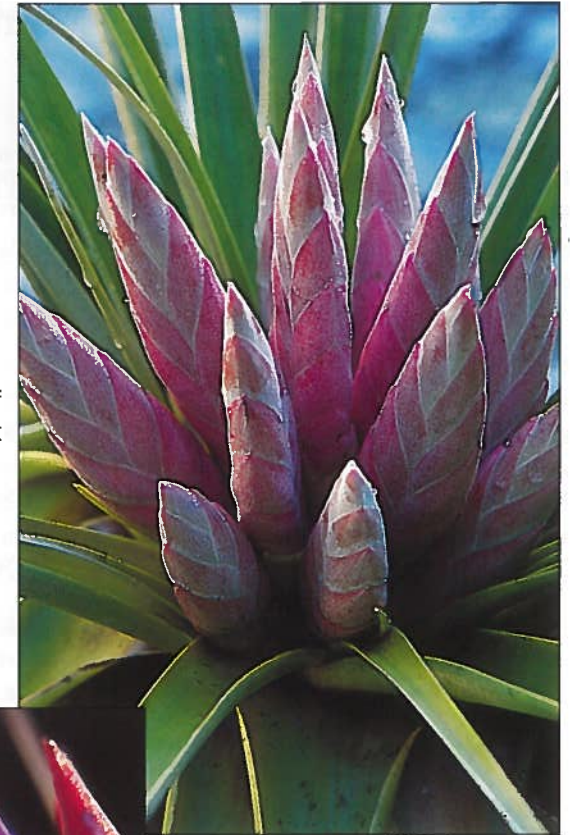


Figure 11.  
A multi-spiked inflorescence of *Tillandsia carlsoniae*. Note that the scape is not visible.



Figure 12.  
Violet flower emerging from soft, pink-colored bract of a *Tillandsia carlsoniae* inflorescence



Carnegie Mellon University, Pittsburgh, Pennsylvania, for her assistance in procuring the photograph of Dr. Carlson.

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[Continued from page 201]

### Yet another new *Guzmania* from northwestern Ecuador

leaves (30–45 mm wide Vs. 25 mm wide), branches of the inflorescence spreading (vs. erect), shorter floral bracts (10–17 mm vs. 18 mm), and longer sepals (20–22 mm vs. 17 mm). The name honors my long-time volunteer research assistant, Mrs. Edna Sieff.

Marie Selby Botanical Gardens,  
Sarasota, Florida

[Continued from page 203]

### Vrieseas in an Alien Environment

Within my little area of Brazil my beloved vrieseas are attaining a highly acceptable standard of growth, flowering beautifully and multiplying while all around them outside is an alien environment.

Magill South Australia.

## *Mezobromelia capituligera*

Lee Moore

Near the town of Ayabaca, Peru in the northern Department of Piura, grows a most spectacular towering red bromeliad. Within sight of the Ecuadorian border, this magnificent species is found in abundance along the western slopes of the Andean Divide. It grows mostly terrestrially, but also grows as an epiphyte at lower levels between 1400-2100 m MSL (Mean Sea Level).

We have been through this area several times over the past years and have seen this great bromeliad, which we had always assumed was a *Vriesea*, many times before. In fact, it used to be known as *Vriesea splitgerberi*, but now bears the name of *Mezobromelia capituligera*. We had found it growing on hillsides and on moss draped, orchid laden trees but had never seen it in full bloom until September 1996. The older inflorescences and the fresh new ones indicate that the major blooming period is probably between July through October.

The very largest of these plants can be a gigantic 4½-5 ft. in diameter with an inflorescence equally as tall, with the lower bracts spreading to 18-20 inches across. Even though they mature and bloom at varying sizes, the smaller ones are still very large plants.

Ayabaca is accessible from the city of Piura, about 6 hours away by road. After leaving the new superhighway at Sullana, some 4½ of those hours are spent climbing up through Andean hills and over rough, but nonetheless interesting roads over the first cordillera before entering the valley of Ayabaca at about 2900 m altitude. Part of the journey takes us up through the Valley of the 'Jolly Green Giants' - which are large fat-bellied, weirdly-shaped, shiny, green-barked *Bombax* trees. During the seeding season these odd-looking trees open their big pods and release large 'cotton balls' which blanket the area and look like miniature fluffy white tumbleweeds blowing in the wind. The strange-looking *Bombax* trees draped in Spanish Moss give the valley a spooky aura somewhat akin to a fantasy fairyland from a Disney cartoon. One almost expects to find Trolls and Goblins lurking behind these ghostly trees.

The month of September is the advent of a massive annual religious pilgrimage by devout believers in the 'Cristo de Ayabaca'. The religious figure is housed in the ancient colonial cathedral found there and is said to impart miraculous powers during this time. We had the unique opportunity to witness this famous pilgrimage of thousands of devotees that walk and crawl hundreds of kilometers from coastal towns, with little or no food or water, enduring unusual hardships as penance for their faith. Some come barefoot over the sharp rocky roads, or on bloody padded knees, while others drag great heavy wooden crosses. The faithful make this pilgrimage each year at this time to cleanse their souls and ask their miracles. If ever you plan to visit Ayabaca, do it in the middle of



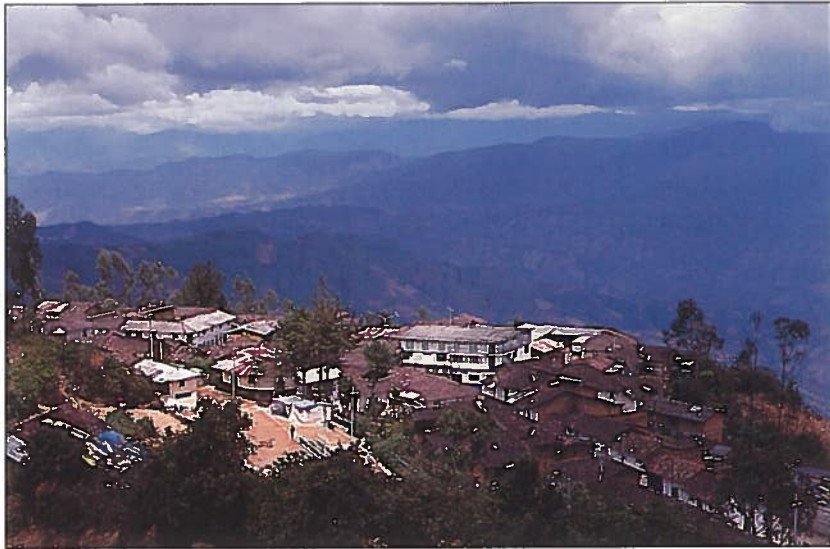


Figure 13.  
Ayabaca, Peru, near the Ecuadorian border.

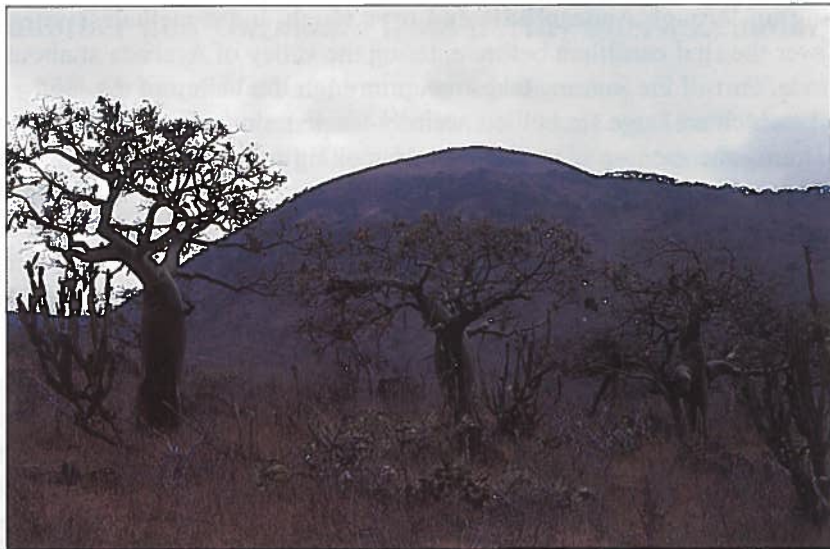


Figure 14.  
*Bombax* trees



Figure 15.  
Chady Moore, wife of the author, showing two specimens of  
*Mezobromelia capituligera*.



Figure 16.  
*Pitcairnia heterophylla* clump with many inflorescences.

September to witness this fascinating human spectacle of faith. The only problem is that there are only a couple of small hostels with a few rooms and they will inevitably be full. You will probably have to camp out with the rest of the pilgrims.

In addition to this large *Mezobromelia*, there are other interesting bromeliads in this area. One is *Tillandsia hamaleana* with clusters of large blue flowers. Another is *Pitcairnia heterophylla* which is basically leafless in flower but is very spiny and has a large rose-red inflorescence. Clumps of these plants can be spectacular...but these plants are topics for a future article.

Miami, Florida

## ERRATA

In Volume 48 (4), July-August 1998, several footnotes were inadvertently omitted from the article on page 184 *Concerning Vriesea × mariae* by P. Duchartre; translation by T.U. Lineham. The first footnote should have appeared after the word JOURNAL in the first sentence of the first paragraph and the notation should have been:

“Journal de la Société Nationale d’Horticulture de France, 3. Série t. XI, September 1889 (published 13 October 1889). A gift of BSI Trustee M. Marcel Lecoufle.”

A second footnote should have occurred after *Vriesea brachystachys* in the fourth line of the first paragraph and informed the reader that that name has since been placed in synonymy with *V. carinata*.

The third footnote should have appeared after the word “Society” in the second sentence of the second paragraph, and indicated that the society referred to was the Société Nationale d’Horticulture de France.

The final footnote referred to the fact that in the initial text of the document, the “m” in *Vriesea × mariae* was initially capitalized, but the lower case spelling conforms to the modern rules of orthography.

Note there is a touch of irony in that these errors had to occur to an article correctly submitted by former JOURNAL editor and member of Editorial Advisory Board, Thomas U. Lineham, who is known for his attention to detail.

As if that were not enough, a further note of irony is that a notice to readers concerning e-mail addresses for the new directory which had been inserted below the article on *Vriesea × mariae*, and which was the probable cause of the footnote omission, itself had an error in it. The e-mail address readers were instructed to use to send their addresses had two letters transposed, resulting in a number of messages being kicked back to their senders. The correct address should have been BSI@nervm.nerdc.ufl.edu, (not “ulf” as printed).

Our apologies to both Tom and to those readers who may have been inconvenienced in using the e-mail address indicated.

## *Puya entre-riosensis*: a New Species From Southern Bolivia

P.L. Ibisch<sup>1</sup> & E. Gross<sup>2</sup>

Until now the flora of Southern Bolivia cannot be regarded as having been intensively studied. Therefore, there are still many floristic surprises waiting to be discovered by the scientific world. The Department of Tarija, located in the extreme southern section of Bolivia, is characterized by an ecological transition from arid *puña* and dry inter-Andean valleys to semihumid montane forests (Tucumanian-Bolivian forest) and Chaco forests. From this region some interesting *Puya* species are known to science, mostly collected several decades ago by some famous botanists. For example, Weddell, was the first person to record a *Puya* species from this region: *P. weddelliana* (Baker) Mez, during the latter part of the last century. Fiebrig found *P. paupera* Mez at the beginning of this century, and Cárdenas collected *P. alba* L.B. Smith in 1952. Two other species, *P. dyckioides* (Baker) Mez and *P. mirabilis* (Mez) L.B. Smith can also be found in this region. Interestingly, in the valleys of Tarija at least two species of dwarf Puyas have evolved: *P. minima* L. B. Smith and *P. hromadnikii* Rauh<sup>3</sup>. The latter belongs to some of the latest *Puya* species described from Bolivia.

The following is the description of a new species which was collected in 1993 by the first author and his wife. At present, 50 *Puya* species, including this one, have been recorded from Bolivia.

*Puya entre-riosensis* P. Ibisch & E. Gross (Figures 17 & 18.)

*Puya entre-riosensis* affinis est *P. trollii* L.B. Smith, sed differt ab ea in characteribus sequentibus: Folia ad 10 mm lata, non ad 20 mm. Pedicelli ad 10 mm longi, non 20 mm. Sepala ad 10 mm longa et acuta, non 15-20 mm et obtusa. Petala 15 mm longa, non 30-40 mm.

**Type:** Bolivia. Departamento Tarija: Province O’Connor, between Tarija and Entre Ríos, near Entre Ríos, 64°14’ W, 21°30’ S, 1800 m a.s.l. The surrounding vegetation can be described as a disturbed shrub area within the Tucumanian-Bolivian forest-formation in a transition zone to semiarid montane Chaco forest. The unique species was observed on rocky soil. Collected: Pierre & Claudia Ibisch No. 93.1282, 30 October 1993 (holotype LPB, isotype HEID).

<sup>1</sup> Fundación Amigos de la Naturaleza Noel Kempff - Science Department (Associated Researcher of the Botanical Institute, University of Bonn, Germany), Casilla 2241, Santa Cruz de la Sierra, Bolivia (ibisch@fan.scbbs-bo.com)

<sup>2</sup> Botanical Institute, University of Bonn, Meckenheimer Allee 170, 53115 Bonn.

<sup>3</sup> Tropische u. subtropische Pflanzenwelt 41 (1983): 5-9. The description of the location is somewhat erroneous. The species has been found between Tarija and Santa Ana. This area obviously belongs to the Department of Tarija (Prov. Cercado) and not to Santa Cruz as mentioned in the diagnosis.



**Plant** stemless, flowering to more than 1 m high. **Leaves** numerous, forming a narrow-leafed rosette. **Sheaths** conspicuous, 20 mm high and 20 mm wide, castaneous. **Blades** attenuate-lanceolate, 50 to 60 cm long, to about 10 mm wide, densely brown lepidote on both sides, laxly serrate, spines antrorse, narrow, red-brown, to 1 mm long, about 5-7 mm from each other. **Scape** about 40 cm long, 6 to 7 mm thick. Scape bracts attenuate, gradually changing into the primary bracts. **Inflorescence** laxly bipinnate, more than 50 cm long, to about 30 cm wide, rachis glabrous, salmon-colored. **Branches** to more than 20 cm long, axis to 2 mm thick, flowers arranged lax-spirally. **Primary bracts** shorter than the sterile base of the branches, lower ones to 4 cm long, attenuate-lanceolate, salmon-colored, nerved when dry, serrate, lepidote only towards the apex. **Flowers** with pedicel to 30 mm long. **Pedicels** to 10 mm long, slender, first erect-spreading, curved after anthesis. **Floral bracts** shorter than the pedicels, dry-papyraceous, broadly ovate, acute, salmon-colored, nerved when dry, inconspicuously serrate to entire. **Sepals** narrowly linear, acute, to 10 mm long, 2 mm wide, salmon-colored, nerved when dry. **Petals** to 15 mm long, forming an erect tube, emerald green, becoming violet and spirally attached together after anthesis. **Stamens** and **style** included. **Stigma** papillous.

This new *Puya*-species is named after the locality Entre Ríos, where it was collected. It is closely related to *P. trollii* L.B. Smith, which is bigger in all parts of the flower. Troll discovered this *Puya* in November 1927 in the Department of Potosí at an altitude of 2,600 m. He thought it to be close to *P. hofstenii* Mez, also occurring in this region. Forty years later L.B. Smith determined this specimen as *P. spathacea* (Grisebach) Mez, which is distributed only in Argentina. But one year later, in 1968, he described it as new species: *P. trollii*.

#### Range and conservation status

The new species may be restricted to the region of Entre Ríos in the Department of Tarija. However, as it is an inconspicuous species it is possible that it may have been overlooked until now in similar ecosystems found in southern Bolivia or even northern Argentina. In case it does turn out that the species is a local endemic it cannot be considered as an endangered species as it occurs in altered vegetation. According to knowledge gained from the study of other species, it has been found that land-degradation (at least by grazing) tends to promote *Puya* species which are normally adapted to shallow and rocky soils.

#### ACKNOWLEDGEMENTS

We thank Tim Miller, Fundación Amigos de la Naturaleza Noel Kempff, Santa Cruz/Bolivia, for revising the manuscript and providing valuable recommendations.

Santa Cruz, Bolivia  
Bonn, Germany



Figure 17.

Type of *Puya entre-riosensis* in its natural habitat.



Figure 18.

Detail of the inflorescence of *Puya entre-riosensis*.





Figure 19.  
Map location of Puya entre-riosensis.



Golden Anniversary  
The Bromeliad Society International  
World Bromeliad Conference

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The registration fee is 70% refundable until June 15, 2000. After that no refund will be given (except in cases of illness or death)



Figure 20.

Photo by Vern Sawyer

*Neoregelia johannis*, one of several plants cultivated as *Neoregelia* "Fosters Pink Tip Concentrica".



Figure 21.

Photo by Wally Berg

*Neoregelia johannis* 'DeRolf', a variegate originally collected in Brazil by Larry DeRolf.

## Neoregelia Notes: Part 2

Harry E. Luther

*Neoregelia johannis* (Carrière) L.B.Smith has been in cultivation for many years, nearly always misidentified as something else. At least part of the problem is the very sparse original material which led to a superficial and ambiguous treatment in Smith's *Flora Neotropica Monograph 14*, part 3. There it was characterized as a large plant with green leaves spotted red and producing a white corolla. Even this short description is at odds with most of the material cultivated as *N. johannis* with blue flowers and purple-tinged foliage. What these cultivated "Neoregelia johannis" are is unknown, but they are likely old and undocumented hybrids involving *N. concentrica* and/or *N. coriacea*. They have nothing in common with true *N. johannis*.

The earliest introduction of *N. johannis* into the United States was probably by Mulford Foster in 1939 or 1940. These plants, and possibly their hybrid derivatives were misidentified as *N. concentrica* (all of the various "Foster's Red Tip" and "Pink Tip Concentricas"). I assume that one of these plants was the parent of *N.* 'Marcon' (*marmorata* × *concentrica* although material grown today as *N.* 'Marcon' is indistinguishable from true *N. marmorata* from São Paulo state in Brazil. As an aside, "Foster's True Marmorata" is not that species; it appears to be a robust form of *N. chlorosticta*!

At a later date, larger and broader leaf selections of *N. johannis* were introduced as *N. cruenta*, a species with which *N. johannis* shares a somewhat similar foliage coloration but little else. True *N. cruenta* has hard, green or yellow-green (rarely reddish) leaves with a dark red "finger nail" and blue-violet petal blades. Many clones of *N. cruenta* are in cultivation, mostly correctly identified; rarely, the red leaf form is misnamed as *N. hatschbachii* (something else entirely).

True *N. johannis* has 10 to 15 medium-textured leaves that vary from 2 to 12 cm wide; are bright yellow-green in good light, always have bright rose or red "finger nails" and may become richly spotted and suffused with red as the plant approaches maturity. The green inflorescence produces white or nearly white flowers. The inflorescence often appears rather undersized in the very broad central well of the flowering plant. Two well-known recent cultivars of *N. johannis* are the giant 'Fairchild' and the beautifully variegated 'DeRolf'. *Neoregelia johannis* is an excellent landscape plant for subtropical and tropical gardens where it can be grown in full or nearly full sunlight and where its imposing size and vigor can be properly appreciated.

*Neoregelia johannis* is native to the Brazilian coastal plain from just south

[Continued on page 225]

## Tenth Australian Bromeliad Conference

Lynn Hudson

Beginning in Melbourne in 1981, bromeliad enthusiasts and dabblers have gathered biennially around Australia to learn more about their chosen passion. This has become an eagerly-awaited pilgrimage for Aussies, not only for sharing and swapping growing habits of bromeliads, but just as strongly for rekindling friendships formed at previous conferences. The next of these gatherings is scheduled for Cairns in August, 1999.

Probably the hardest part of organizing any conference is successfully contacting all persons who might be interested in attending. Our conference is well known to those of us in Australia, but we would also like to invite bromeliad enthusiasts from around the world to attend. It would be great to put a face on the names we have gotten to know over our many years of bromeliad growing. We would be delighted to have you join us and "throw and shrimp on the barbie" or "grab a stubby" (or perhaps a glass of our wonderful Aussie wine) before we get down to the serious business of discussing bromeliads.

The conference will feature seminars, plant displays, and a bromeliad show. Our guest speaker will be "Mr. Billbergia", Don Beadle from Naples, Florida. There will be visits to local gardens, botanical gardens, and optional post-conference tours at additional costs.

The 10th Australian National Bromeliad Conference, "Bromeliads X", is scheduled to be held at Cairns, North Queensland, from the 28th through the 31st of August, 1999, at the Tradewinds Esplanade Hotel, right on the shore of Trinity Bay. All rooms have a balcony with a view of the harbor. Overseas delegates may request accommodation bookings be made for them at the time they register for the conference.

We are declaring Cairns to be a "necktie free" zone during the conference. We like to be friendly, casual, and comfortable. Most places refuse those wearing singlets and rubber thongs, even with neckties, but otherwise dress comfortably. Watch out guys! While the hotel may admit men wearing neckties, be on the lookout for the scissors patrol!

Cairns, in northeastern Australia, is a lush tropical destination with a backdrop of beautiful mountain ranges and the Great Barrier Reef of the Coral Sea at our shoreline. August is mid-springtime, with a temperature range of 18° - 27° C.

There is much to see and do in Cairns. Even a three-month trip would not cover it all, let alone a three-day trip. For example, the optional tours include Kuranda, Daintree, Moore Reef & Fitzroy Island, and Arlington Reef.

Kuranda is 30 km from Cairns. You can take a skyrail up to the local markets, visit member's gardens, and visit a herb garden. Kuranda Village also has a wildlife noctarium (a place where the rainforest's reclusive night feeders can be seen in their natural habitat), Bird World, butterfly sanctuary, aviary of Australian parrots and finches, and an arts and crafts market.

Return by catching a train at the famous Kuranda Garden Station for a trip through spectacular scenery as you head back down through this beautiful mountain range with its waterfalls, deep ravines, views of the coast, and verdant rainforest.

Daintree is a World Heritage rainforest area. You will be able to see unique plant, bird, and Australian animal life as well as simply enjoy the beautiful rainforest. Mossman Gorge National Park is also in the area.

Moore Reef and Fitzroy Island are reached by means of a fast catamaran to Fitzroy Island and its rainforest. On-board presentation is by a marine naturalist who provides guided coral viewing from semi-submersible craft and a glass bottom boat. There is a theatre-style underwater observatory featuring fish feeding, and a marine life touch-tank.

Arlington Reef is reached by fast catamaran, also with on-board presentation by a marine naturalist, with guided coral viewing from semi-submersible craft and glass bottom boats. You can also visit a working cultured pearl farm at Arlington Reef.

For more information about the conference, contact:

Cairns Bromeliad Study Group, Inc.  
P.O. Box 28  
Cairns, Queensland, 4870  
Australia.

Come on over...join us, enjoy our hills, color, sunshine, and hospitality, as well as getting a first-hand look at how we grow bromeliads in Australia.

*Cairns, Queensland, Australia*

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[Continued from page 223]

### Neoregelia Notes: Part 2

of the city of Rio de Janeiro to northern São Paulo state. There it grows both as an epiphyte and as a terrestrial in restinga and Atlantic forests.

Finally, I must acknowledge and thank Elton Leme for being first to recognize true *N. johannis*.

*Sarasota, Florida*



## Book Reviews

Jason R. Grant

1. *Flora Mesoamericana. Vol. 6 Alismataceae a Cyperaceae.*
2. *Flórula de las Reservas Biológicas de Iquitos, Perú.*
3. *Catalogue of the Flowering Plants and Gymnosperms of Peru.*
4. *Catálogo de las Plantas Vasculares de la República Argentina.*
5. *Flora of St. John, U.S. Virgin Islands*
6. *Guide to the Vascular Plants of Central French Guiana. Part 1. Pteridophytes, Gymnosperms, and Monocotyledons*

***Flora Mesoamericana. Vol. 6 Alismataceae a Cyperaceae.*** Davidse, G., M. Sousa S., A.O. Chater (Ed. Gen.), et al. 1994. México: Universidad Autónoma de México. 28.5 cm, 253 pages, hard cover, ISBN 968-36-3309-9 (entire work), ISBN 968-36-3310-2 (Vol. 6). Order from: Department Eleven, Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166-0299 USA; fax: (314) 577-9594; email: dept11@mobot.org; web site: <http://www.mobot.org>.

This is the second published volume of the 'Flora Mesoamericana'. The flora covers the southern Mexican states of Tabasco, Chiapas, and Yucatán, through Guatemala, Belize, El Salvador, Honduras, Nicaragua, Costa Rica and Panamá. This volume contains the monocot families Alismataceae through Cyperaceae. The most useful and apparent feature is that it is written in Spanish since all of the countries within the flora area except Belize have Spanish as their primary language.

The Bromeliaceae (pp. 89-156) authored by John Utley and Kathy Burt-Utley consist of 18 genera and 301 species including: *Aechmea* (23 spp.), *Ananas* (1 spp.), *Androlepis* (1 spp.), *Araeococcus* (1 spp.), *Billbergia* (4 spp.), *Bromelia* (5 spp.), *Catopsis* (17 spp.), *Fosterella* (1 spp.), *Greigia* (6 spp.), *Guzmania* (34 spp.), *Hechtia* (6 spp.), *Hohenbergiopsis* (1 spp.), *Mezobromelia* (1 spp.), *Pitcairnia* (40 spp.), *Puya* (2 spp.), *Ronnbergia* (2 spp.), *Tillandsia* (93 spp.), *Vriesea* (63 spp.)

There are full citations, synonyms, a single cited specimen for each country a species occurs, and habitat information. Their descriptions are brief but sufficient. In this treatment, many species recognized in Smith's 'Flora Neotropica' monographs are placed into synonymy here for the first time. Some of the most important include: *Billbergia mexicana* (= *B. pallidiflora*), *Catopsis compacta* (= *C. hahnii*), *C. pedicellata* (= *C. micrantha*), *Greigia juareziana* (= *G. oaxacana*), *Pitcairnia macrachlamys* (= *P. recurvata*), *P. oblanceolata* (= *P. arcuata*), *P. undulatosepala* (= *P. breedlovei*), *Ronnbergia petersii* (= *Aechmea allenii*), *Tillandsia adscendens* (= *T. rothschuhiana*), *T. beutelspacheri* (= *T. fasciculata*), *T. cauliflora* (= *T. excelsa*), *T. ehlersiana* (= *T. seleriana*), *T.*

*velickiana* (= *T. matudae*), and *T. werckleana* (= *T. excelsa*). This book is recommended for anyone interested in the flora of Central America.

***Flórula de las Reservas Biológicas de Iquitos, Perú. Allpahuayo-Mishana, Explornapo Camp, Explorama Lodge.*** Martínez, R.V. Missouri Botanical Garden. 1997. 1046 pages, hard cover, 28.5 cm, ISBN 0-915279-48-7, ISSN 0161-1542. Order from: Department Eleven, Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166-0299 USA; fax: (314) 577-9594; email: dept11@mobot.org; web site: <http://www.mobot.org>.

This is a complete flora (pteridophytes, gymnosperms, dicots, and monocots) of three separate reserves in Maynas Province, Peru: La Reserva de Allpahuayo-Mishana (3,750 hectares), La Reserva Explornapo Camp (1,725 hectares), and La Reserva Explorama Lodge (195.1 hectares). These reserves are along the Amazon River about equidistant from the borders of Ecuador, Colombia, and Brazil. While the land mass of the flora concerns is relatively small, the size of the book is large, weighing nearly 8 pounds! The book describes 164 families, 902 genera, and 2,700 species. The Bromeliaceae (pp. 777-783, 961) consist of 9 genera and 15 species including: *Aechmea* (4 spp.), *Ananas* (1 spp.), *Billbergia* (1 spp.), *Catopsis* (1 spp.), *Guzmania* (2 spp.), *Neoregelia* (3 spp.), *Pitcairnia* (1 spp.), *Streptocalyx* (1 spp.), and *Tillandsia* (1 spp.). While the bromeliad flora isn't significant, the book as a whole is so impressive to be recommended for anyone interested in the flora of northwestern South America.

***Catalogue of the Flowering Plants and Gymnosperms of Peru. Catálogo de las Angiospermas y Gimnospermas del Perú.*** Brako, L. & J.L. Zarucchi. Missouri Botanical Garden. 1996. 1286 pages, hard cover, 28.5 cm, ISBN 0-915279-19-3, ISSN 0161-1542. Order from: Department Eleven, Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166-0299 USA; fax: (314) 577-9594; email: dept11@mobot.org; web site: <http://www.mobot.org>.

This is a complete synonymized checklist of the angiosperms and gymnosperms of Peru. The Bromeliaceae (pp. 233-261) is the 9th largest family in the country, and consist of 17 genera and 420 species (56.9% endemic) including: *Aechmea* (25 spp.), *Ananas* (4 spp.), *Billbergia* (6 spp.), *Bromelia* (4 spp.), *Catopsis* (1 spp.), *Deuterocohnia* (1 spp.), *Fosterella* (5 spp.), *Greigia* (2 spp.), *Guzmania* (35 spp.), *Mezobromelia* (2 spp.), *Neoregelia* (9 spp.), *Pitcairnia* (76 spp.), *Puya* (72 spp.), *Ronnbergia* (1 spp.), *Streptocalyx* (7 spp.), *Tillandsia* (144 spp.), and *Vriesea* (26 spp.). There are full citations, synonyms, references to pertinent literature, cited voucher specimens, and data on habit, habitat, elevation, and its distribution among Peruvian departments. This is an important list that accurately catalogues an important center of diversity of the family.

***Catálogo de las Plantas Vasculares de la República Argentina. I. Pteridophyta, Gymnospermae y Angiospermae (Monocotyledoneae).*** Zuloaga, F.O. & O. Morrone (editores). Missouri Botanical Garden. 1996. 323 pages, hard cover, 26

cm, ISBN 0-915279-40-1, ISSN 0161-1542. Order from: Department Eleven, Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166-0299 USA; fax: (314) 577-9594; email: dept11@mobot.org; web site: http://www.mobot.org.

This is a complete synonymized checklist of the pteridophytes, gymnosperms, and monocots of Argentina. The Bromeliaceae (pp. 106-121) contributed by Morrone & Zuluaga consist of 13 genera and 110 species including: *Acanthostachys* (1 spp.), *Aechmea* (4 spp.), *Ananas* (1 spp.), *Billbergia* (2 spp.), *Bromelia* (5 spp.), *Deuterocohnia* (8 spp.), *Dyckia* (13 spp.), *Fosterella* (2 spp.), *Pitcairnia* (3 spp.), *Pseudananas* (1 spp.), *Puya* (14 spp.), *Tillandsia* (52 spp.), and *Vriesea* (4 spp.). For each species there are complete lists of synonymy, references, lists of the Argentine provinces and other countries it resides, and citation of a single examined specimen. This is an important list that accurately catalogues all the species of the family for a large range of the family.

**Flora of St. John, U.S. Virgin Islands.** Acevedo-Rodriguez, P., 1996. Memoirs of the New York Botanical Garden Volume 78. 581 pages, hard cover, 27 cm, ISBN 0-89327-402-X. Order from: The New York Botanical Garden, Bronx, New York 10458-5126. Tel. (718) 817-8721; fax: (718) 817-8842; email: scipubs@nybg.org.

This is a detailed flora of the island of St. John, part of the U.S. Virgin Islands, located between the islands of St. Thomas and Tortola. The flora is detailed enough for use on any of the U.S. or British Virgin Islands. There is full taxonomic synonymy, citations, descriptions of genera and species, complete keys, the distribution on St. John as well as throughout the Greater and Lesser Antilles, common names, and line drawings of select species. The Bromeliaceae (pp. 467-472) consist of 5 genera and 8 species: *Aechmea* (1 spp.), *Bromelia* (1 spp.), *Catopsis* (1 spp.), *Pitcairnia* (1 spp.), and *Tillandsia* (4 spp.). All the species are common wide ranging taxa except one, *Tillandsia lineatispica* that is apparently endemic to St. John and neighboring Vieques Island, Puerto Rico. The author notes that since the morphology is intermediate between *Tillandsia utriculata* and *T. fasciculata*, it may be nothing more than a hybrid between those taxa, but further research is necessary.

**Guide to the Vascular Plants of Central French Guiana. Part 1. Pteridophytes, Gymnosperms, and Monocotyledons.** Mori, S., G. Cremers, C. Gracie, J.-J. de Granville, M. Hoff, and J.D. Mitchel. 1997. Memoirs of the New York Botanical Garden Volume 76, Part 1. 422 pages, hard cover, 27 cm, ISBN 0-89327-398-8. Order from: The New York Botanical Garden, Bronx, New York 10458-5126. Tel. (718) 817-8721; fax: (718) 817-8842; email: scipubs@nybg.org.

This is the first of a planned two-volume flora of the area surrounding Saül, French Guiana. It may also be useful for the rest of French Guiana, as well as adjacent areas of northeastern South America. There are descriptions of genera and species, complete keys, line drawings of select species, and numerous color

photos (including eleven of bromeliads). There are descriptions of genera and species, the distribution on St. John as well as throughout the Greater and Lesser Antilles, common names, and line drawings of select species. The Bromeliaceae (pp. 215-233) contributed by Eric Gouda consist of 12 genera and 33 species: *Aechmea* (6 spp.), *Araeococcus* (2 spp.), *Billbergia* (1 spp.), *Disteganthus* (2 spp.), *Steptocalyx* (1 spp.), *Pepinia* (1 spp.), *Pitcairnia* (2 spp.), *Catopsis* (2 spp.), *Guzmania* (3 spp.), *Racinaea* (1 spp.), *Tillandsia* (8 spp.), and *Vriesea* (4 spp.). This is a very fine flora that should be very useful to anyone interested in the flora of the Guianas and adjacent regions of northeastern South America.

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## Contributions to the Society

There have been several recent substantial contributions to the BSI. These generous donations, along with an upsurge in memberships have begun to put the BSI back on more stable financial ground after several years of deficit spending to maintain the range of services we provide. They could not have come at a better time.

The BSI would like to thank Herb Plever, Trustee of the Arthur and Henrietta A Sorin Charitable Trust for a donation of \$5,000 to the BSI color fund. Donations such as this and many other smaller contributions have resulted in an increased number of color photographs over the last few issues.

We would also like to thank the Houston Bromeliad Society for a donation of \$5,000 to the BSI General Fund.

On a personal note, I would especially like to thank the Houston Bromeliad Society for an additional \$1,000 donation to the BSI color fund in the name of my late daughter, Leslie Baranowski.

---

## Klaus Ehlers

We were saddened to learn of the recent death of Klaus Ehlers after a long illness. Klaus was a former editor of the excellent German bromeliad journal *Die Bromelie*. Both Klaus and his wife Renate Ehlers traveled widely through parts of the world where bromeliads are found, discovered many new species, and have contributed greatly to the knowledge about bromeliads.

We extend our sympathy to Renate and other members of the Ehlers family.

# Mulford B. Foster Bromeliad Identification Center Observes 20th Anniversary

Harry E. Luther<sup>1</sup>

Early in 1978 The Bromeliad Society, Inc. began to investigate the possibility of establishing a center for identifying bromeliad species. In March 1978, after negotiations with the Gardens Director, Calaway Dodson, it was agreed to have the center at the Marie Selby Botanical Gardens in Sarasota, Florida. The new center was named for Mulford B. Foster, who died in August 1978. Foster was one of the greatest bromeliad collectors of all time, with nearly 200 new species introduced into science. I was appointed Director of the Center in the fall of 1978. With the support of the Bromeliad Society, Inc., many BSI affiliate societies, and friends and family of Foster, the Mulford B. Foster Identification Center (BIC) opened for business in January 1979.

The purpose of the BIC is to provide competent and reasonably rapid identification of bromeliads for hobby collectors as well as professional botanists and horticulturists worldwide. In order to perform this function a large reference collection of the taxonomic literature, illustrations and preserved specimens had to be assembled.

Nearly 3,000 files on individual species, each with all material obtainable to facilitate identification, have been created. A typical file contains a copy of the original description, photographs of living and preserved specimens, botanical illustrations, and any horticultural accounts of the species. These files are constantly updated, as new material is available.

In 1978 the total bromeliad herbarium collection (preserved, dried specimens) was housed in one-half of a single cabinet, 100 specimens nearly all from Ecuador. Twenty years later the herbarium contains over 7,700 specimens in 17 cabinets including over one hundred type specimens (the standards for correctly applying names). One of the most important reasons for the growth of the herbarium collection is that I provide identifications for collections from many botanical gardens and museums both in the United States and abroad. In return for this service to institutions, their duplicate specimens are incorporated into the Selby Herbarium. The living bromeliad collection, the research resource most visible to the public as it is used in Tropical Display House, has greatly increased in both quantity and quality over the past two decades due to the efforts of staff and collaborators. Presently we grow 46 genera (out of a total of 55) and over 1,300 species (out of a total of 2,800). Some of these are unique to cultivation. As with other permanent collections, the living bromeliad collection

<sup>1</sup> Director, Mulford B. Foster Bromeliad Identification Center

helps to fulfill the Garden's mission of research, conservation and display of tropical epiphytes.

Communication is an important aspect of all scientific endeavors. I have published more than 130 papers since 1980. Although most of these are scientific descriptions of new bromeliad species, some have covered horticultural taxonomy, cultivation, conservation and floristics. Perhaps the most useful publications are *An Alphabetical List of Bromeliad Binomials*, and enumeration of the bromeliad species considered valid at the BIC, and the series *De Rebus Bromeliaceanun*, an update of the taxonomic literature pertaining to Bromeliaceae. Both of these are co-authored with my research assistant, Mrs. Edna Sieff.

Day to day operations consist of data-basing the ever increasing amount of taxonomic and distributional information, maintaining the files and slide collection, identifying submitted specimens (hundreds each year, mostly from other botanical institutions) and working on publications and correspondence.

Much of the above relies on the tireless efforts of Edna Sieff, who has worked at Selby as a volunteer for 15 years and has given over 20,00 hours (about 15,00 at BIC).

The BIC serves both as a service (identification of bromeliad species) and as a repository for all information pertaining to the bromeliad family. Its services and resources are available to all hobby and professional growers, botanists, and conservation biologist as well as to an increasing number of students from the USA and several foreign countries. The Center is supported solely by gifts and contributions. Selby is clearly a World Bromeliad Center and the BIC itself makes an important contribution to maintaining the gardens' mission.

Sarasota, Florida

*Reprinted in part from the July, 1998 newsletter of the Caloosahatchee Meristem. The article was originally published in the Bulletin, the newsletter of the Marie Selby Botanical Gardens.*



## Color Variation in *Aechmea aquilega*

Ana Rousse

Photographs by the Author

*Aechmea aquilega* (Salisbury) Grisebach, was first described in 1864 and is the classic form of this species. This form reaches 1 meter or more in height, and has long leaves with big, brown antrorse spines. The scape is erect, stout, and is surrounded by rose colored bracts. The secondary bracts and floral bracts are large and dark pink. Flowers are light yellow and about 3.5 centimeters long.

A new form was recently exhibited at the Annual Bromeliad Show in Caracas in 1997. This new form, *Aechmea aquilega* "var. *alba*," had not been previously described. *Aechmea aquilega* "var. *alba*" has pure white bracts (figure 22). This specimen was collected by Elsa Baasch. It was found growing between 0 and 500 meters above sea level in the central coastal mountains of Venezuela, in the State of Carabobo, near the town of Boca de Aroa.

Another new cultivar was also introduced at the same show. *Aechmea aquilega* "var. *rubra*" has red bracts with yellow flowers, but the most striking feature of the plant is its red foliage (figure 23). This specimen was collected by Francisco Riva in the eastern coastal mountains of Venezuela, in the State of Sucre, near Medina Beach.

Lyman Smith described a variety, *Aechmea aquilega* Type "Jamaica", which has dull green secondary floral bracts. Another variety described by Lyman Smith (1962), *Aechmea aquilega* "var. *chrysocoma*" has bright yellow secondary floral bracts. He pointed out that such characteristics are "a striking distinction in life but generally lost in dried herbarium specimens"<sup>6</sup>

### ACKNOWLEDGEMENT

I am grateful to Jorge Matos for correcting the manuscript.

### REFERENCES

Smith, L.B., 1962, *Phytologia*, Vol. 8, p. 219.

———, *Flora Neotropica*, pp. 1823-1827.

*Apartado 80.555, Caracas 1080, Venezuela*

<sup>6</sup> Ed. Note: The Alphabetical List of Bromeliad Binomials by Luther and Sieff does not recognize any of these "varieties" as taxonomic varieties of *Aechmea aquilega*.



Figure 22.  
*Aechmea aquilega*  
"variety alba"

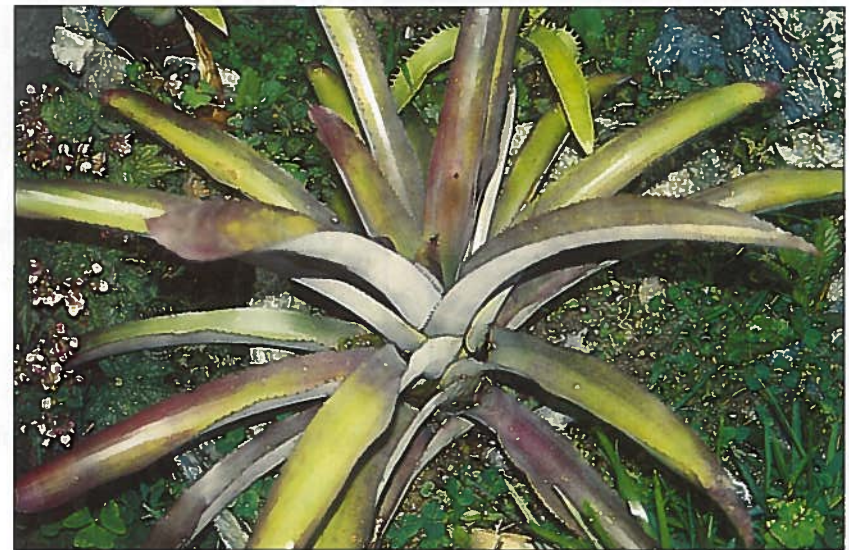


Figure 23.  
*Aechmea aquilega* "variety rubra"

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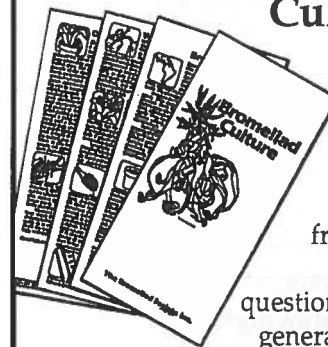
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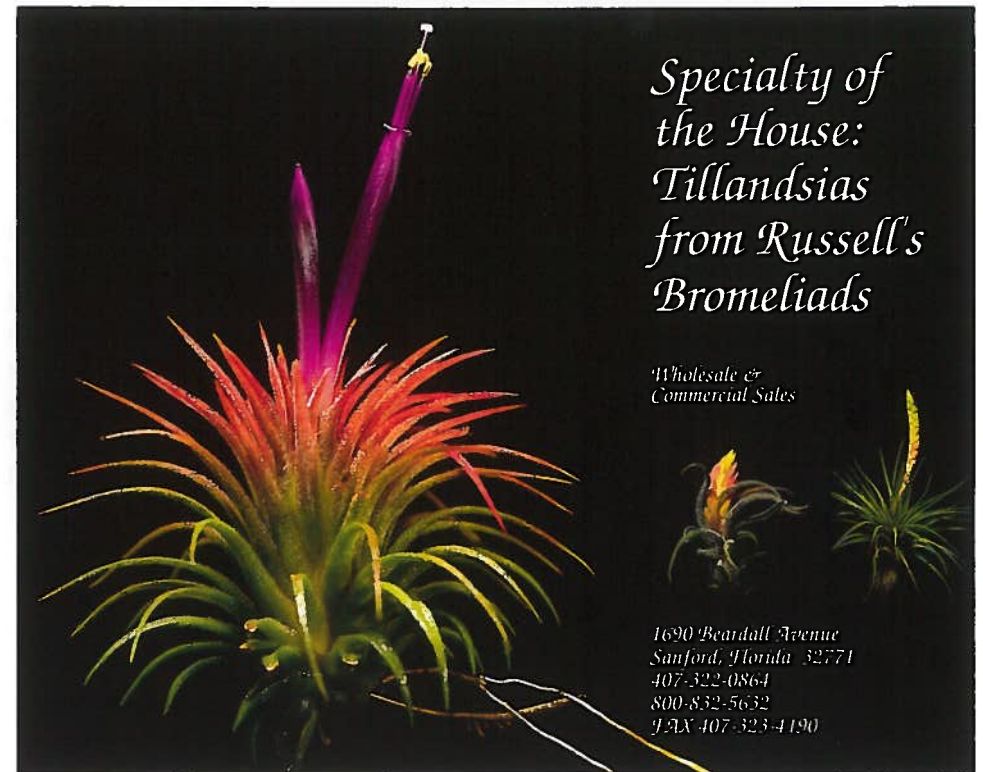
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Membership and subscriptions to the JOURNAL: Please see inside front cover.

Mulford B. Foster Bromeliad Identification center: Send specimens and contributions to Harry E. Luther, at the Center, The Marie Selby Botanical Gardens, 811 South Palm Ave., Sarasota, FL 34236. FAX: 941-951-1474.

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Web Site: Dan Kinnard, 32552 Alipaz St., #9d San Juan Capistrano, CA 92675

World Conference: Thomas W. Wolfe, 5211 Lake LeClaire Road, Lutz, FL 33549.





*Pitcairnia* 'Beaujolais',  
cultivar from a cross  
of *P. rubronigrifolia* ×  
*P. smithiorum* made  
by Jim Irvin.

## Calendar

- 11-12 Sep      The 1998 Bromeliad Extravaganza will be held at the Ramada Inn Resort Oceanfront 2700 N. Atlantic Ave, Daytona Beach. The event will be hosted by the Florida East Coast Bromeliad Society. On Friday there will be a Hawaiian Luau Feast and dinner show, while plant sales, seminars, rare plant auction, and a banquet will be held on Saturday. Contact: Ted Nuse, 3 Rocky Creek Trail, Ormond Beach, FL 32174-4963.
- 19-20 Sep      River Ridge Bromeliad Society' annual show and sale at the City Park Botanical Gardens, 1 Palm Drive, New Orleans, LA. Show hours from 1 to 5 p.m. on Saturday and 10 to 5 p.m. on Sunday. Plant sale hours 10 to 5 on both days. There is a \$3 admission charge to enter the City Park Botanical Gardens. Contact: Shirley Alcock, 601-799-4813
- 26 Sep      Florida East Coast Bromeliad Society Extravaganza, Ramada Inn Resort, Oceanfront at 2700 N. Atlantic Ave., Daytona Beach across from Belair Plaza
- 24-25 Oct      Bromeliad Society of Australia Spring Show, Burwood R.S.L., corner of Shaftsbury Road and Clifton Ave., Burwood. Contact Joan Williams at (02) 9680.1824
- 31 Oct- 1 Nov      Bromeliad Society of New South Wales Spring Show, Senior Citizen Club, Five Dock. Contact Alice Williams at (02) 9971.6183
- 7-8 Nov      Caloosahatchee Bromeliad Society Exhibit and Sale at the Garden Council Building on Cleveland Ave (in front of Lee Memorial Hospital). Hours 9 a.m. to 5 p.m. Saturday, and 10 a.m. to 4 p.m. Sunday. Contact Hattie Lou Smith, 941-694-1135; e-mail Ssmil1613@aol.com.