Journal of The Bromeliad Society

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Journal of the Bromeliad Society

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Cover photographs. Front: *Guzmania butcheri*, a colorful Panamanian bromeliad, will no longer be misidentified by those who read page 256. Photo by Joseph A. Griffith. Back: A Christmas wreath composed of tillandsias is described by Judy Showers.

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This Is How It Works; Call for 1992 Nominations For Directors

The Bromeliad Society, Inc. is managed by a Board of Directors and by officers and committee chairmen elected by the Board. The directors come from various Regions of the society and meet at least once each year to represent you in managing the Society.

This is a call for nominations for the 1993–1995 term:

Regions having openings		
Australia	–	1 director
California	–	1 director
Florida	–	1 director
Louisiana	–	1 director
Texas	–	1 director

Who may nominate? Any voting member of the society who resides in a region for which there is an opening may nominate a candidate for an opening in that region.

Who may be nominated: A nominee must: (1) be a voting member of the society currently and have been a voting member for the three consecutive years prior to nomination; (2) reside in the region for which nominated; (3) not have served two consecutive terms as a director immediately preceding nomination; (4) agree to being nominated; (5) agree to serve as a director if elected.

Procedure for nominating: (1) obtain the consent of the prospective nominee and verify compliance with the qualification criteria; (2) airmail nominations to the chairman of the Nominations Committee between 1 January and 18 March 1992 inclusive. Nominations by telephone will be accepted through 15 March but must be confirmed in writing; (3) supply with each nomination the full name, address and telephone number of the nominee, the position for which the nomination is being made, local society affiliation (if any), and a brief autobiography of the nominee.

Mail nominations to: John M. Anderson
Chairman, Nominations Committee
P. O. Box 5202
Corpus Christi, TX 78465-5202

The Tillandsia Aspect in Northeastern Mexico

F.G. Breckenridge III **Photographs by the author**

My desire to explore the northeastern states of Mexico coincided with a renewed interest in cultivating tillandsias at home in central Texas. Since I was planning to cultivate tillandsias without benefit of a greenhouse, I believed that species collected as close to central Texas as possible would do the best.

Being short of both time and money, I planned a five-day trip to the states of Tamaulipas, San Luis Potosi, and Nuevo León. The itinerary included Austin, San Antonio, and Laredo in Texas, then south and southeast in Mexico to Monterrey, Victoria, and Mante. From Mante we would travel west over the Sierra Madre Orientale to eastern San Luis Potosi state, then north to Monterrey, and back to central Texas via Laredo and San Antonio.

First day. I met my travelling companion Ken in San Antonio about 7 a.m. and drove to the border crossing at Laredo. On arriving there, I obtained Mexican auto insurance and exchanged dollars for pesos. The traffic was heavy and our passage across the Rio Grande bridge was slow. While inching along we noticed an uncomfortable sensation of rising and falling. It was an eerie feeling and especially scary when we realized that it was caused by the undulations of the bridge. We were thankful to reach the far side.

The contrast between the two countries intrigues me every time I visit Mexico. It takes getting used to, especially in adjusting to the way Mexicans drive. We got through Nuevo Laredo by exercising great care and headed south on the old Pan-American Highway (number 85).

The geography changed little for fifty miles, continuing to be hilly, rocky, and almost bare of vegetation, much like south Texas. As we approached Sabina Hidalgo, we began to see species of trees and shrubs common to the classic Tamaulipan thorn scrub. Especially prominent was the flowering wild olive *Cordia boissieri,* its large, white blossoms contrasting sharply with olive-green leaves. Also brightening up an otherwise drab, late winter countryside was the blackbrush acacia *Acacia rigidula,* which splashed the plains with its bold profusion of tiny yellow flowers.

Just south of Sabinas, low mountains appeared on the horizon. This sight is, for me, particularly remarkable because much of Texas is flat, especially nearby south Texas. To find sizeable mountains less than 100 miles south is surprising. Along the roadside through the mountain pass, called Paso de Mamulique, we began to see many kinds of succulent plants but no species of *Hechtia* although they have been reported in these mountains.

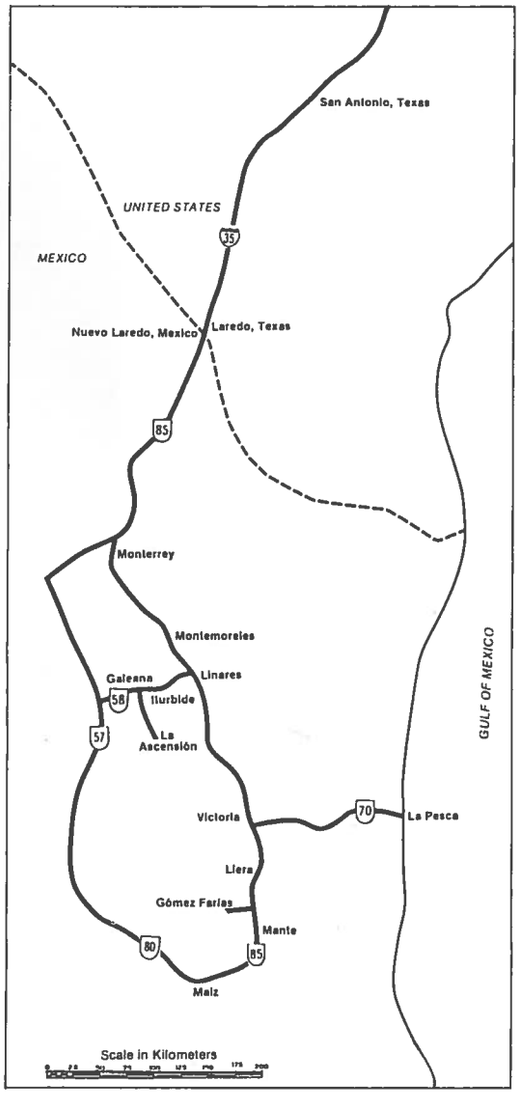
Figure 1
Tillandsia deppeana presents a beautiful and unusual contrast with the greater number of gray tillandsias growing epiphytically in the pine and deciduous forest near Gómez Farías.

Once through these mountains, we continued on to Monterrey, Mexico's Colossus of the North. After getting lost for two hours on what we thought was a bypass and getting an amazing variety of responses to our requests for directions, we finally stumbled back onto good old highway 85.

With great relief, we headed toward Linares, about 50 km southeast of Montemoreles. Our destination that night was Galeana, a village west of Linares on highway 58. To reach there we had to drive through Santa Rosa Canyon, which is spectacular in terms of both geology and botany. The uplands, as we entered the canyon, were punctuated with the brilliant purple of the flowering redbud trees (*Cercis* sp.). Pines and junipers, arborescent yuccas, large agaves, sotol (*Dasylirion* sp.) and various deciduous trees began to appear. As we drove deeper into the canyon, the road began to follow the riverbed. The canyon walls and road cuts were populated with succulent and semisucculent plants. We saw palms, cycads, the yucca-agave-sotol "trinity," cacti, and the "molé" *(Agave bracteosa),* a light green plant with a loose rosette of recurved leaves that grows on the perpendicular canyon walls.

Although we had seen no exotic tillandsias on any trees or rocks, the botanical aspect of this area was so compellingly wondrous that we stopped as

soon as we could find a safe spot to park. This location is several miles east of the village of Iturbide, still on highway 58 from Linares to San Roberto. It was late afternoon and the sun was on the margins of the mountains.



We began to explore the canyon walls hoping to find *Tillandsia karwinskyana* growing on the rocks since this locale is one of its habitats. Ken had found it in the course of another trip just north of Galeana and also north of a neighboring hamlet, 18 de Marzo. We scanned the trees, too, but there were no exotic tillandsias to be seen. We split up and while I walked along a newly cleared road, he crossed the main road and reconnoitered along the stream bank. Still finding no tillandsias after ten or so minutes I returned to the truck where Ken reported, with obvious satisfaction, that he had found a *Tillandsia* species in a large tree down on the creek.

Sure enough, here and there along the trunk and branches of what looked like a live oak *(Quercus virginiana)* were large and small clusters of a gray, fine-leafed tillandsias, our first exotic of the expedition. The sight reminded me of my first encounter in 1977 with Mexican tillandsias in the wild. With a boost from Ken, I got into the lowest crotch and saw that the leaves were straight or only slightly curved, quite narrow, and with no hint of a bulbous base. The plants clustered freely and resembled tufts of gray grass. I thought at first that it might by *Tillandsia juncea* and quickly collected several clusters with inflorescences. Pleased with ourselves and hoping that this was a good omen, we returned in the waning light to the truck.

Galeana, being a small place back in the mountains, has little need for hotels and restaurants. Our meal was disappointing and the hotel

Figure 2
Trying to find enough light to photograph tree-borne bromeliads is a frequent problem. The profusion of tillandsias on this tree found near Galeana is evident even in silhouette.

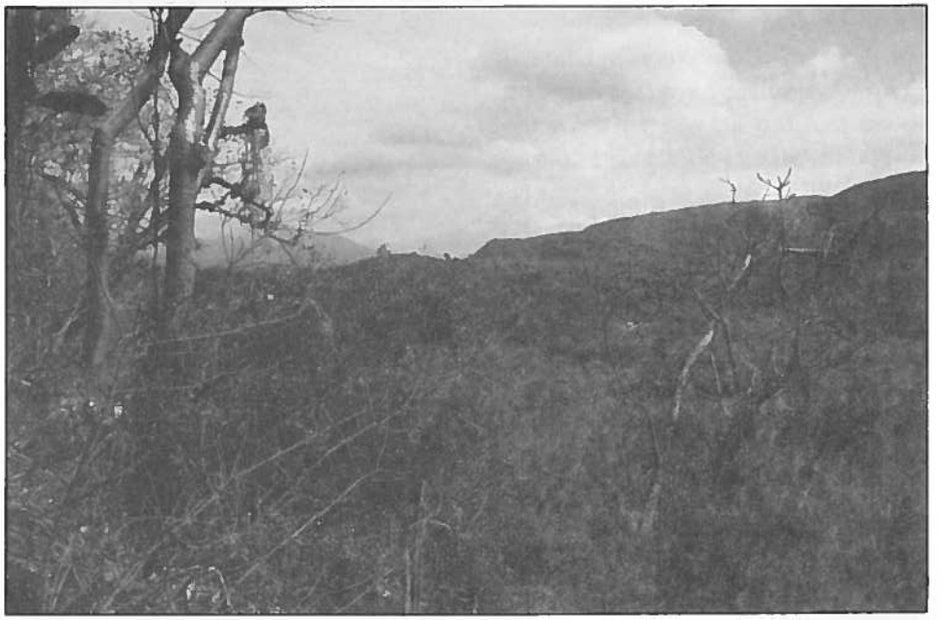


Figure 3
The winter aspect of the Gómez Farla area looking towards the distant mountains in the west.

Figure 4
In the Gómez Faría area, the author found *Tillandsia ionantha* in full bloom. *T. fasciculata* and *T. schiedeana* appear also in this photograph.

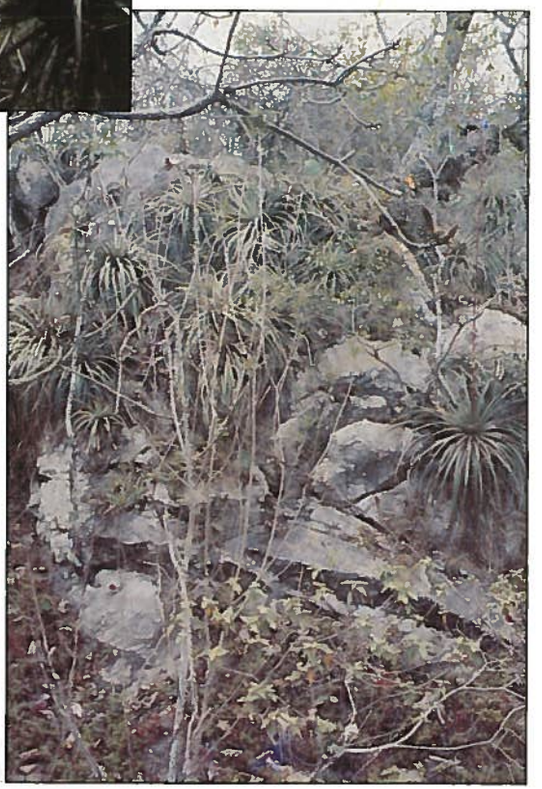


Figure 5
Hechtia species found near Gómez grew on rocks at road cuts; others in the shade of roadside trees. These specimens, some in bloom, resemble *H. texensis*, in the author's opinion.

room was cold. We did have a light, a table, and Lyman Smith's *Tillandsia* key to help us decide that we had collected *T. festucoides.* We had no trouble going to sleep.

Second day. Before sunrise we were on the road (highway 61) heading south from Galeana to La Ascensión to an area of gypsum hills to look for a mint *(Hedeoma ciliolata)* and tillandsias. We found many kinds of plants including two species of *Hedeoma* but no tillandsias.

After backtracking to highway 58 at Galeana, we turned east and drove back through Santa Rosa Canyon searching for *Tillandsia karwinskyana* but seeing only *T. usneoides* and *T. recurvata.* At Linares we turned south to Ciudad Victoria and reached that clean and neat city in the early afternoon. There we rented a hotel room to ensure our accommodations for the night and then drove east towards La Pesca on the coast, a distance I estimated to be eighty miles. As we learned, there is a low range of mountains between Victoria and the Gulf coast. Twenty miles of mountains. The eighty miles became 100 through light rain. And we saw no tillandsias.

One reason for driving to La Pesca was that I had read Sue Gardner's description in the *Journal*[1] of tillandsias inhabiting the thorn scrub of the Tamaulipan Gulf coast. She showed on an accompanying map a band about 30 miles wide, extending inland from the coast, from just south of the Rio Grande all the way to Tampico. The band represented the habitat of such *Tillandsia* species as *baileyi, paucifolia,* and *ionantha* and I was interested in acquiring specimens. The second reason for our side trip was that my venerable companion remembered a trip to La Pesca in 1963 when he saw an unusual bit of tropical woodland, quite distinct from the scrub, near La Pesca. He thought it might, if still there, harbor exotic tillandsias.

It was a 200-mile goose chase. If the genus is there at all it is not present in large enough numbers to be seen by the casual eye and we lacked the time for a detailed search. On returning to Victoria we got lost again, tried to turn around on a one-way street, and nearly got arrested. Finally, we found the hotel and had a good meal. Back in our room we scratched our heads at how we managed to spend an entire day in Mexico without seeing one Mexican tillandsia. We also learned that hot water was available in 15 minutes if one guessed which faucet was "hot." We guessed wrong and had to wait 30 minutes.

Third day. Heading south on highway 85 again and finished with side trips and wild goose chases, we were off to Gómez Farías. Gómez is a small village just off the main highway and north-northwest of Mante. It is nestled up against the Sierra Madre Orientale on the road leading to Rancho Cielo, a

[1] Tillandsias of Gulf Coastal Tamaulipas, Mexico, 33:102–107.

research station in the cloud forest. It was a location sure to have an interesting array of tillandsias according to a botany professor friend who has been there often.

About 35 miles south of Victoria we reached the town of Llera where we collected *Tillandsia ionantha,* a sparse population at possibly the northeastern limit of the (Mexican) species. Since the plants were in bloom, we could not fail to notice the color. The short host trees made collecting easy.[2] This was more like it. With invigorated enthusiasm we drove on south searching the trees as we went.

Some 15 miles south of Llera, at another town called Galeana, we came upon a line of very large, old trees. Clusters of tillandsias weighed the huge boughs: *Tillandsia fasciculata, T. schiedeana,* and *T. ionantha* (fig. 2). The profusion and diversity of species reminded me again of my 1977 trip. We also saw and did not collect a large, dark green, spiny bromeliad, possibly *Aechmea bracteata* growing along the fence line. We thought it unsightly.

Returning to our mission, we spotted the road leading to Gómez, about 60 miles south of Victoria, with the mountains rising just beyond the town (fig. 3). Following the paved road past the village, we reached the dirt road leading to the foothills and then left the truck near a campesino's house *(con permisso)* when the track became too steep.

On the steep slope above the road we found very tall, slender trees liberally festooned with epiphytes including cacti, ferns, orchids, and tillandsias, but most of the plants were out of reach. Continuing, we finally spotted a slope with stunted, but plant-bearing, trees. We climbed up the slope with care because it was composed of very loose rocks inhabited by spiny cacti and agaves and reached, finally, an area where footing was tolerably secure and the epiphytes were within reach. We collected and photographed *Tillandsia fasciculata* with scapes developed but just before blooming, *T. schiedeana* and *T. ionantha* in bloom (fig. 4), and a plant similar to *T. polystachia.* The latter had smooth, light green leaves that contrasted with the gray of the other species.

Since it was almost lunchtime we returned to the truck and left Gómez Farías. The morning had been everything that we hoped for.

On the way back to the Pan-American Highway, we stopped to investigate a hechtia we had seen on the way in. I wanted to collect any hechtias seen on this trip to compare with a taxon I knew from the Big Bend area of west Texas, *Hechtia texensis.* These were growing on rocks at the road cuts (fig. 5). They

[2] My theory that this specimen would be especially suited to central Texas cultivation by being tolerant of cool winter temperatures and low humidity was proved. It grew well in Texas and survived even the indignity of having to live mostly indoors in southeastern Pennsylvania.

resembled *H. texensis,* yet I noticed that they differed in size and habit. Some found in full sun were about the size of the Big Bend *H. texensis,* but we found others growing in the shade of roadside trees that were much larger, that is about two and one-half to three feet in diameter. In addition, some of these hechtias were marginally epiphytic.

We had spent half of our time at that point and had no choice but to continue to Mante. After lunch there, we drove to Antiguo Morelos and there turned west onto highway 80 to cross the Sierra through a pass at 4,250 feet above sea level near El Salto Falls. We were hoping that in this transit we would find tillandsias not previously encountered.

West of Antiguo, as the highway began its ascent, the vegetation appeared promising in its luxuriance, especially along the Río Salto. At Puerto de Sabinas we encountered a large, spiny-leafed, tank-type bromeliad, perhaps *Aechmea mexicana,* growing in a tree. At a roadside park, we found another grass-like, fasciculate, gray tillandsia indistinguishable from the Galeana specimens and collected several to compare with the (we thought) *T. festucoides.*

Climbing quickly toward the pass we entered a woodland where the trees, mostly oaks, were heavily tenanted with epiphytes. We were disappointed to find only three tillandsia species. They were the *festucoides*-suspect, a medium-sized plant resembling *T. utriculata,* and a wide-leafed, tank-type bromeliad in flower that we thought was *T. deppeana* (fig. 1), a species reported from the pass. It was a huge thing that looked nothing like our little, gray-leafed tillandsias.

By late afternoon the mountains had clouded over and we could not continue our explorations. We decided to continue to our planned stop, Ciudad de Maiz, where we hoped to find a hotel. Arriving at dusk, we found a suitable place with a restaurant and protected parking. While stretching our legs, we met the owner of the motel, who spoke excellent English. He made our stay quite pleasant.

I learned that night that my companion Ken has many interests other than botanizing. He is a student of ethnobotany. Focusing on the herbal lore of an Indian *curandera* (native healer) named Julia, who was staying at the motel, Ken would give the Spanish name of a particular plant and then Julia would supply the Indian name. Julia's pronunciation of her native tongue was very strange to my ear and sometimes to my friend's too! In one instance when the norteamericano ethnobotanist gave Julia a Spanish plant name to translate, she seemed to clear her throat and pause. Ken then repeated himself and Julia again cleared her throat, but with emphasis! At that moment we all realized what had happened and laughed heartily. The curandera wasn't clearing her throat; that sound *was* the Indian word for the plant! It's that kind of happening that, for me, makes botanical field trips to Mexico so interesting and delightful.

After Julia left and we had eaten, we crawled into our beds for a well-earned rest. Thus the end of a very long and productive third day.

Fourth day. This was a day slated for travel. We intrepid explorers had to be back to our respective Texas homes by Friday evening. So we were as far south, at Maiz, as we could go and still get back on time. Ken had made good time on a previous trip northbound using highway 57, which links San Luis Potosi (the city) to Saltillo. We could intersect that highway about 70 miles west of Maiz at Huisache Junction.

The country from Maiz to Huisache Junction is pure Chihuahuan desert. We saw many interesting cacti but no tillandsias or other bromeliads. We hurried on north, hoping to make Monterrey with daylight left so that we could look for *Tillandsia karwinskyana* one last time. It has been reported from a tourist attraction called Grutas Garcia (Garcia's Cave).

Nearing Monterrey we were appalled at the heavy smog that we hadn't experienced the previous Monday. Finding a highway marked "To Nuevo Laredo," just west of Monterrey, we took it with pleasure in order to avoid getting lost in Monterrey again! Happily, this bypass also took us to the road to Garcia's Cave. Seldom does serendipity flow in one's favor in Mexico. We arrived at the cave around three in the afternoon and canvassed the area looking for a habitat likely to harbor the elusive *Tillandsia karwinskyana.* There was certainly no dearth of rocks, its preferred support: the area is mountainous with sheer walls. We chose a likely mountain and set off to explore it.

We spent the rest of the afternoon climbing all over that mountain looking for *Tillandsia karwinskyana* or any other member of the genus. If *T. karwinskyana* still exists in that area it is out of both reach and sight. While somewhat discouraged, we knew that we would have to leave seeing and collecting *T. karwinskyana* for future trips.

From the Monterrey bypass we returned to the Pan-American Highway and drove north to Sabinas Hidalgo in the teeth of a blue norther—the wind so strong that it blew hanging metal signs horizontal. With no interest in supper we turned in.

Fifth day. Once past the undulating bridge to the United States immigration and customs station, we were routed to the plant quarantine and inspection station. We saw two studious-looking officials who told us to bring in our plants. They saw two very tired, extremely obsessive/compulsive, yet happy tillandsiaphilers. They inspected our assiduously cleaned plants and passed them without a hitch and there we were then, on the streets of Laredo. After that, it was back to San Antonio and Austin. Mission accomplished.

San Antonio, Texas

The author is the plant recorder at the San Antonio, Texas, Botanical Center. His specialty is plant systematics.

Metamasius callizona in Four Counties in South Florida

J.H. Frank[1] and M.C. Thomas[2]

Metamasius callizona (Chevrolat), a weevil of Central American origin, has been present in Broward and southern Palm Beach counties at least since late 1989 (O'Brien et al. 1990). In parks and other localities in those counties, it attacks and kills native *Tillandsia utriculata, T. fasciculata,* and *T. paucifolia* (Frank and Thomas 1991). It does not confine its attentions to native *Tillandsia* species since it attacked imported *Tillandsia* and also *Neoregelia, Hohenbergia, Cryptanthus* and *Vriesia* in a bromeliad collection in North Fort Myers, Lee County (McKenzie 1990). The infestation in North Fort Myers (map) may have been an isolated event, and all weevils there may have been killed by chemicals. The infestation in Broward and southern Palm Beach counties (map), however, is widespread in native, epiphytic bromeliads, so chemical eradication is not feasible.

On 24 and 27 May 1991, one of us (JHF) saw numbers of damaged *T. utriculata* plants lying on the ground (as in fig. 6) under oak trees at Castellow Hammock, a county park in Dade County (map). Fifteen *M. callizona* cocoons were discovered in these plants. The cocoons either were empty (adult weevils had emerged), or contained newly-developed adult weevils, or contained weevil pupae. In February 1991 in Palm Beach and Broward counties, larvae, cocoons and adults were found in almost equal numbers (Frank and Thomas 1991), which is likely to be the situation of an established weevil population. The fact that no larvae or adults (except in cocoons) were found at Castellow Hammock suggests that all the individuals found were offspring of a female weevil that arrived there some months earlier and laid eggs in several bromeliads. Colonization of Castellow Hammock by *M. callizona* probably occurred in spring 1991.

We do not yet know the duration of the egg, larval, or pupal stages of the weevil in nature, nor how long the adults (fig. 7) will live. When the larva is fully grown it makes a cocoon of plant fibre (fig. 8) in which is pupates. Larvae that pupated in the laboratory produced adults on average 15 days later. Adults seem to survive for months in the laboratory. We do not know the maximum distance adults are capable of flying in a single flight or in a series of flights, though we suspect that most flights are short, and that movement of the weevil to western Lee County and to southern Dade County most likely was caused by human aid

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[2]Division of Plant Industry, Florida Dept. of Agriculture & Consumer Services, P.O. Box 147100, Gainesville, FL 32614-7100.

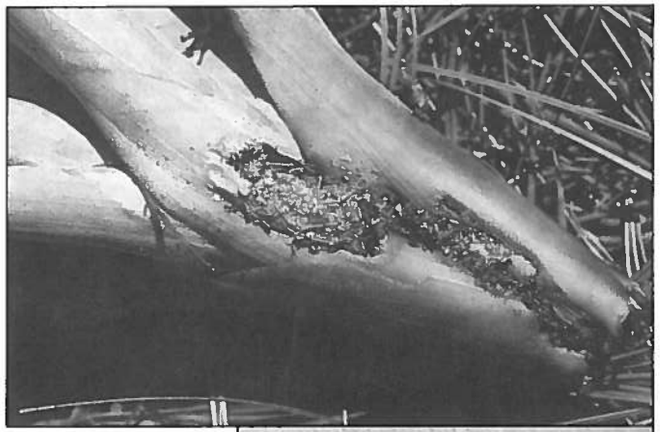
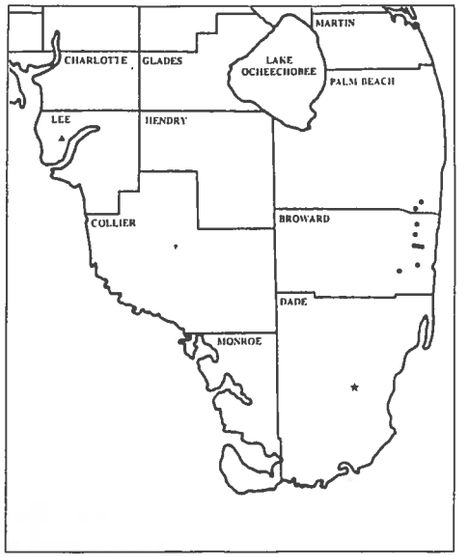


Figure 6
Base of a bromeliad destroyed by feeding by *Metamasius callizona* larvae.

Figure 7
Adult *M. callizona*

Photos by J.L. Castner

Figure 8
Fully-grown larva of *M. callizona* in a tunnelled-out bromeliad stem. The larva rests beside a cocoon that it made from plant fibre.



Map of southern Florida, showing sites in Broward, and Palm Beach counties (dots), Lee County (triangle), and Dade County (star) where *M. callizona* has been detected.

(i.e., that someone moved plants infected with weevils to those places, and that the plants either were moved from Broward or Palm Beach counties or were imported from southern Mexico or Central America).

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McKenzie, G. 1990. Editorial. Caloosahatchee Meristem (October: 3–6.

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Weevil Research Funds

Carol M. Johnson

At a regular meeting in Gainesville, January 1991, the Florida Council of Bromeliad Societies voted to assume as one of its primary goals the eradication of the Central American weevil *Metamasius callizona,* which is attacking and destroying native and greenhouse populations of bromeliads in southern Florida. Primary action will be to fund the work of Dr. J.H. Frank of the Entomology Dept., University of Florida, who has undertaken the task of isolating living specimens of the weevil in order to determine control and eradication of the pest. Dr. Frank's opinion is that the weevil, in its Central American habitat, is controlled by natural predators, which are not present in Florida.

Funds amounting to $1,200.00 have been supplied by the Florida Council and the Bromeliad Society of South Florida but more money will undoubtedly be needed. Bromeliad Societies and individual members, as well as commercial growers of bromeliads, are urged to contribute to this fund.

As voted at the January meeting, all funds for weevil research will be collected and disbursed through the Florida Council of Bromeliad Societies. Please make donations payable to: Treasurer, FCBS and mail to 3961 Markham Woods Road, Longwood, FL 32779. Be sure to mark checks for "Weevil Research Fund."

Misnamed Bromeliads, No. 9: *Guzmania butcheri*

Harry E. Luther

The colorful Panamanian bromeliad shown on the front cover has been cultivated in this country as well as in Europe and, possibly, Australia for over twenty years. *Guzmania butcheri* was described by Dr. Werner Rauh in 1988 and named in honor of the expatriate American plant collector Henry Butcher of Vulcan, Panama. It was first introduced into horticulture, it appears, by Nat DeLeon, who also distributed material to Europe. Although it has persisted there as a minor crop, it has nearly disappeared in the United States. I last saw it offered in quantity from a foliage plant grower in Ohio in 1977. The first plant to be added to the research collection at Selby Botanical Gardens came from an Australian grower. Since then, we have received material from European and Californian growers as well as new field collections from Panama.

In the horticultural trade, this plant is usually misidentified as *Guzmania bracteosa* or *Guzmania sanguinea* var. *brevipedicellata.* With the former it shares little except yellow flowers and it differs from the latter by its fewer, narrower leaves and a few-flowered, spicate inflorescence.

Guzmania butcheri Rauh is easily grown if kept moist and warm (not hot); it is very sensitive to low temperatures. Most clones are self-pollinating and seedlings can be flowered in three years or less.

The photograph of *Guzmania butcheri* shown here was taken by Joseph A. Griffith, first place winner in the Marie Selby Botanical Gardens 1991 photographic contest.

M.B. Foster Bromeliad Identification Center
Marie Selby Botanical Gardens
Sarasota, Florida

New Directors, 1992–1994

Polly Pascal and Charlien Rose were reelected directors to represent the Florida and Texas Regions, respectively. No other nominations were received. Congratulations to our reelected directors.

Report on *Aechmea sphaerocephala*

Georg Zizka;[1] excerpts translated and with comments by H. Ulrich Baensch

In May of last year [1989] a bromeliad of the *Aechmea* subgenus *Chevaliera* began to bloom at the Frankfurt Palmengarten. This plant is remarkable not only because of its size but also because of its especially long flowering period. We received the plant through a seed exchange with the Botanical Garden of Rio de Janeiro in 1972. The species name refers to the form of its immature inflorescence: the Greek words *sphaira,* meaning ball, and *kephale,* meaning head.

Aechmea sphaerocephala is a stemless bromeliad with a narrow, funnel-shaped rosette; its numerous leaves are up to 300 cm long, 10 cm wide, and approximately 3.5 mm thick. The scape has a clearly developed sterile part. At 60 cm in length and 2.5 cm in diameter, the scape is considerably shorter than the leaves. The scape bracts are erect, red to pink, tapering to a point, and the margins are slightly serrulate. The cone-like inflorescence is compact and carries a number of sessile flowers. At the end of the flowering phase, the inflorescence of our plant, which was at first spherical and then cylindrical, reached a length of 21 cm and a diameter of 11 cm.

The extraordinarily long-flowering duration is an exception, even among the bromeliads. After 15 months, the blooming period is not yet completed. A few months ago, two additional inflorescences developed from side shoots; the interesting inflorescence of the plant will delight us for many more months to come.

According to Smith and Downs (1979)[2], species of the subgenus *Chevaliera* occur in Central America, the northern part of South America and eastern Brazil. The group is distinguished by characteristics of its flowers and inflorescences. The inflorescence is mostly simple and cone-shaped, bracts are woody, appendages on the inner side of the petals are missing or are reduced. *Aechmea sphaerocephala* is native to southeastern Brazil.

[Dr. Baensch's comments follow:]

The article also shows a full-page photograph of the herbarium specimen from the Museum of Natural History in Paris, as well as a scanning electron micrograph of the trichomes.

---

[1] *Der Palmengarten 3/90:137–140.*

[2] *Bromelioideae. Flora Neotropica, no. 14, pt. 3, pp. 1950–1051, fig. 673 A–D.*

Photos by H.U. Baensch

Figure 9
The growth habit of a four-year old *Aechmea spaerocephala* is shown here in contrast with *A. blanchetiana* (on the right).

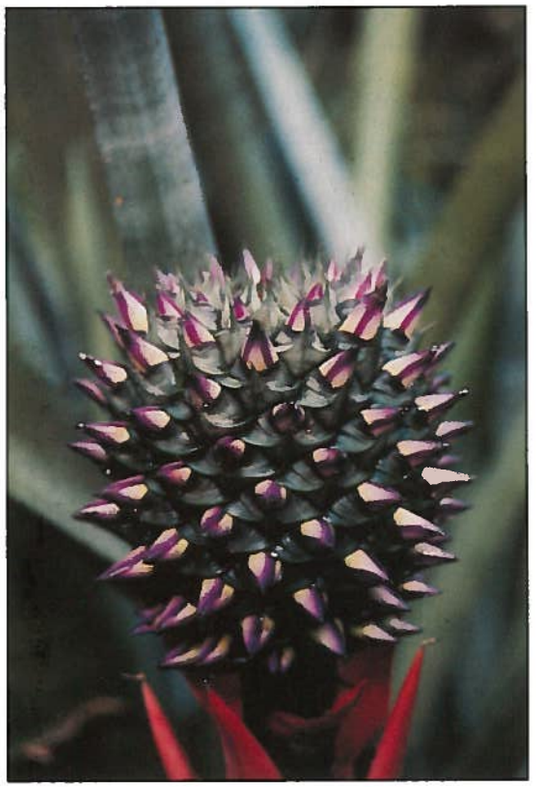


Figure 10
The spherical shape of the *A. spaerocephala* inflorescence at eight months changes gradually to cylindrical.

The last time the reviewer saw the bromeliad collection of the Palmengarten was in September 1990. At that time, the *Aechmea sphaerocephala* was still a highlight. After 17 months in bloom, the inflorescence was impressive, still young and fresh.

The pictures taken in my collection at Nassau show a younger *A. sphaerocephala* to present the habit of this interesting species. The plant, cultivated from a pup, is four years old, 80 cm high. The species is very slow growing. The sturdy, handsome rosette consists of approximately 25 stiff leaves with a strong, sharp spine at the apex. It needs a porous, well-aerated medium, otherwise heart rot may occur.

Under the bright sun in the Bahamas and shade given by a tree only for some hours at midday, the appearance of the plant is much sturdier and the leaves of a fully grown plant will not exceed much more than 100 cm.

Aechmea sphaerocephala was reported in *Journal*, volume 24, page 184 (1974) but was not correctly identified. The photograph in that article most likely shows a large specimen of *Aechmea angustifolia.*[3]

The Palmengarten of the city of Frankfurt/Main with its 50 acres was founded in 1870. It is one of the most significant botanical gardens in Europe. The extensive bromeliad collection with more than 1,000 species of 42 genera is cultivated in various show houses including the new bromeliarium, in which the plants are shown as in nature. The numerous tillandsias are housed in large glass cabinets where you can see but not touch them.

Dr. G. Zizka, curator, is responsible for the bromeliads as well as the distinguished succulent collection and the insectivores.

Nassau, Bahamas

[3] *Dr. Werner Rauh, in a separate letter, commented that the cover picture of* Journal, *number 4, 1984, was incorrectly identified as* A. sphaerocephala. *His opinion is that the picture shows* A. saxicola, *or* A. depressa, *or* A. multiflora.

Sally Thompson assumed the duties of BSI Publications Sales effective 12 September 1991. Please address all orders and communications concerning BSI publications sales (other than the *Bulletin* or *Journal*) to her at 29275 N.E. Putman Road, Newberg, OR 97132. Her telephone number is 503-538-2774. We welcome Mrs. Thompson and thank Annie Navetta and her husband Robert Soppe for their superior management of publication sales.—Jack Grubb, Pres.

What Has the BSI Ever Done For Me?

Jack Burton Grubb, President

The question, "What has the BSI ever done for me?" is frequently followed by its companion, "Why should I join, or contribute, or write...." The officers, regional directors (your own representatives), and several standing committee chairmen again scratched their heads over those questions at the 1991 June meeting of the Board of Directors. So what did the meeting produce?

The most important product was an approved financial report and budget for the new fiscal year. New directors were initiated into the mysteries of what the board does in conducting the business of the society. They learned that Robert's Rules apply but usually in a relaxed manner while successive motions are debated. They observed that once in a while somebody gets excited and has to be admonished, but the democratic form of operating prevails.

As another example, Mark Dimmitt (Western Region) reported on the form, content, and cost of a proposed cultural handbook and persuaded his peers that the project was necessary. The treasurer reported that funds were available. The project is now underway with the officers withholding final approval authority until the completed draft is ready. Don Beadle introduced his preliminary, 249-page cultivar and hybrid checklist to the congratulations of the other members of the board. He was authorized to continue his work and money was appropriated to reproduce the checklist. There was a great deal of talk, but formally proposed business matters were considered politely and decisions were made.

Last year, the board approved rewritten bylaws and standing rules. The standing rules contain the details not really appropriate in the bylaws and also record policy decisions. The copies were mailed to the board members and committee chairmen and one copy to each affiliated society. Did you know that your society librarian has a copy and that you can read it and copy it?

Working from that base, maybe we can get your representatives to tell you what they do and what those activities mean to you. We can do that through a series of essays, or statements, or whatever you would like to call them and print one or two at a time in the *Journal* for the next several issues. Some of the directors and committee chairmen don't know about this project yet but they will learn.

Let's start with the president of the society:

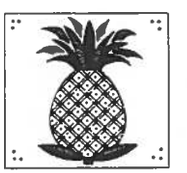
"I think it important to remind you that all of the regional directors, standing committee chairpersons (except one), and the officers (except the editor and the membership secretary) serve without any kind of pay. With brief reference to the exceptions: Harvey C. Beltz has been in charge of the Seed Fund for years and serves many members with his important work. He will tell you later what he does and why. Until then, accept the fact that receiving and distributing bromeliad seeds is a test of devotion and worth the allowance that he draws as a minor percentage of the money that he handles.

"The editor receives an allowance for the use of his automobile to the post office, to the mailing service, the photo lab, something like 5,000 miles a year on society business. The membership secretary is paid less than the minimum wage for just the record keeping without mentioning correspondence, preparing the directory, and other work that she will describe. The treasurer probably should get an allowance but he hasn't asked although some of his predecessors were paid.

"As president, I oversee the general operation of the society. In addition to presiding over the annual meetings, I am a member ex-officio of the eleven standing committees. I travel frequently to speak to local societies. I am proud of the fact that I have been able to bring the board to an atmosphere of purposeful cooperation. We are really working together toward useful goals. We have reached a reasonably steady level in our finances.

"The society is, obviously, nothing until its members take active part. You can be active in your local group, accept when nominated for office, contribute to the *Journal,* help to recruit new members, take pride in your organization and its accomplishments. What you do for your society is really a reflection of what your society does for you. We are a group of affiliates. The word affiliate comes from the Latin words for son and daughter. We are not squabbling siblings, but responsible members of a family dedicated to work together. You will forgive my preaching. I am in my fourth year as president and feel deeply about this organization."

10008 Hyde Place
River Ridge, LA 70123



Bromeliad Arrangement: *Portea petropolitana* var. *extensa*

May A. Moir

One of our group of flower arrangers expected to be away from Honolulu for a considerable time and offered to let us have the flowering spikes of her *Portea petropolitana* from her garden. I always hesitate to cut my own because they are an important focal point of the landscaping outside my bay window. Fourteen sprays of the *Portea* were cut to make a pair of arrangements for the entrance of The Honolulu Academy of Arts.

I have a couple of plants of a pink-red (watermelon color) ti *(cordyline)* and found that the color was exactly that of the stems of the *Portea.* These ti leaves are about 12 to 15 inches long and narrow. I felt that the pink leaves would emphasize the color of the stems. The heavy, putty-colored vases were ideal to balance the heavy *Portea* stems, which were placed first and the vases well filled with water. The ti leaves were tucked in around the stems and more water added right to the brim. In warm weather the plant material drinks considerable water. These arrangements were made on Monday morning and then checked on Friday. A few dry ti leaves were removed and more water added. I expect these arrangements to be good for two weeks with a few ti leaves added and more water as needed.

Honolulu, Hawaii

Figure 11

Photo by Tibur Franco

A New Status for a Scarcely Known *Vriesea* from Espírito Santo, Brazil

Elton M.C. Leme

The first time we collected this vriesea was in 1980. Since then, maintaining it in cultivation was very difficult. Year after year it became weaker. It produced, however, an imperfectly developed inflorescence, which was photographed by Luiz Claudio Marigo. After that, pups were not noticed. It was definitely dead.

As its appearance was very unusual, we decided to return to the place where it had been collected in order to gather new material and supplementary information about it. In September 1990, Roberto A. Kautsky, Jones C.da Silva, and I went to look for it around the city of Domingos Martins, Espírito Santo. The starting point was a hill about 700–800 m high very near that city. We walked along a narrow trail on the crest of the hill for about three hours. On the ground of the Atlantic Forest, a huge population of *Quesnelia blanda* (Scott ex Beer) Mez was in full flower intermingled with *Nidularium procerum* Lindman, scattered specimens of *Aechmea mutica* L.B. Smith, and occasional samples of *Aechmea microcephala* Pereira & Leme. The epiphytic bromeliad communities of the area were composed of *Vriesea ensiformis* (Vellozo) Beer, *Neoregelia leprosa* L.B. Smith, *Tillandsia kautskyi* E. Pereira, and in the damp spots the tiny *Nidularium lymanioides* Pereira & Leme, to name a few.

After walking for another hour, the first specimens of the desired vriesea came to view. Now, after 10 years, its population seemed reduced and there was a predominance of young plants. Even so, the few mature specimens found were just beginning to bloom.

Later, this vriesea was detected in Sr. Kautsky's nearby, private forest, as well as in an ecologically similar place in the County of Santa Leopoldina, between Domingos Martins and Santa Tereza.

After thinking at first that it was a new species, we finally concluded that it had been described by Dr. Lyman B. Smith as variety *gracilior* of *Vriesea platynema* Gaudichaud, on the basis of a specimen found in the seed-producing stage collected by Mulford and Racine Foster at Santa Tereza on July 26, 1939.

Now, with a full-flowering specimen and the isotype of the variety *gracilior* it was possible to achieve taxonomic understanding of the bromeliad and to establish that it has characteristics enough to deserve the status of species. The illustrations (figures 12–15) provide further evidence.

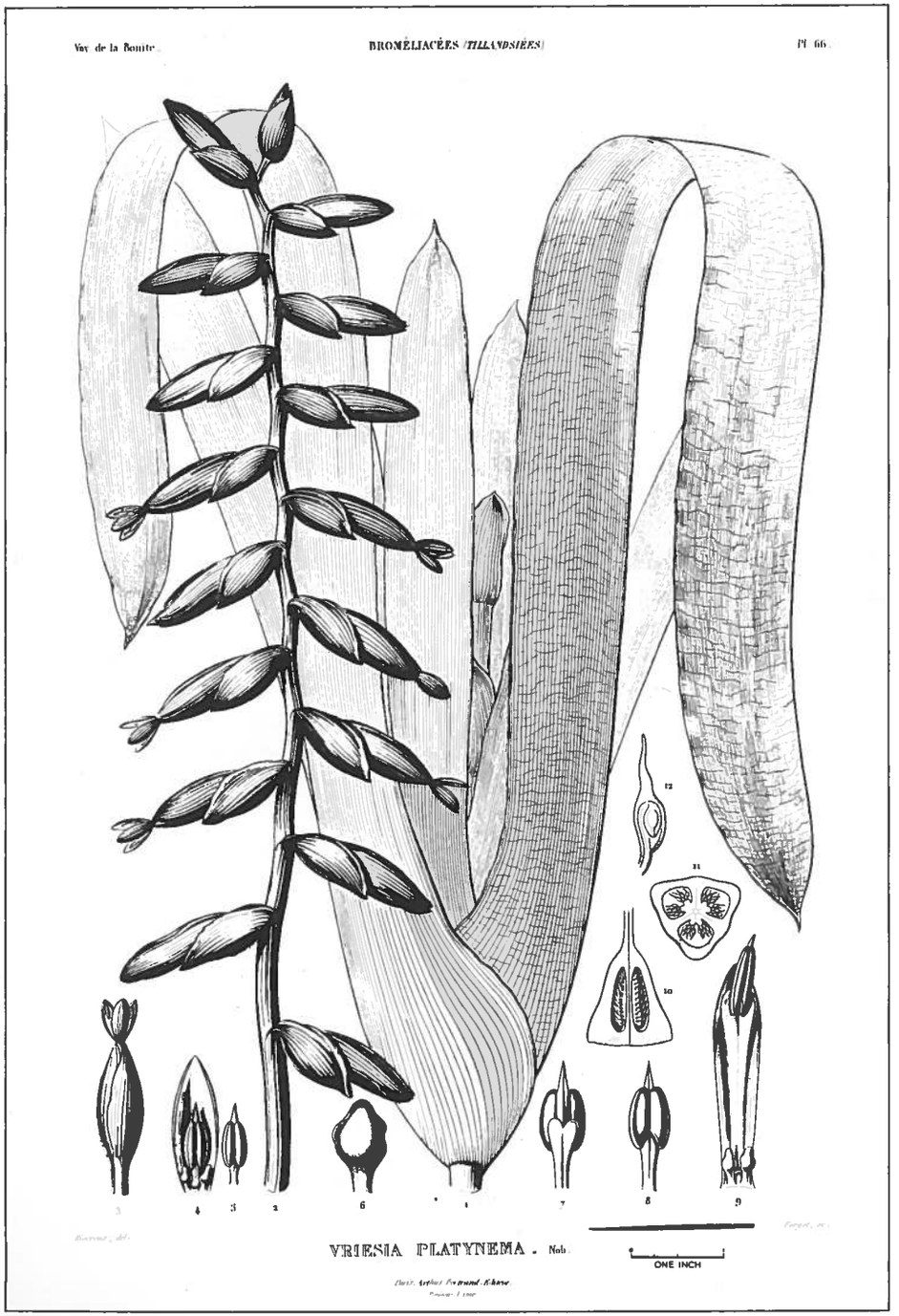


Figure 12
Vriesea platynema. Plate 66 of Gaudichaud's Voyage de la Bonite (1843). The one-inch scale has been superimposed on the metric scale.

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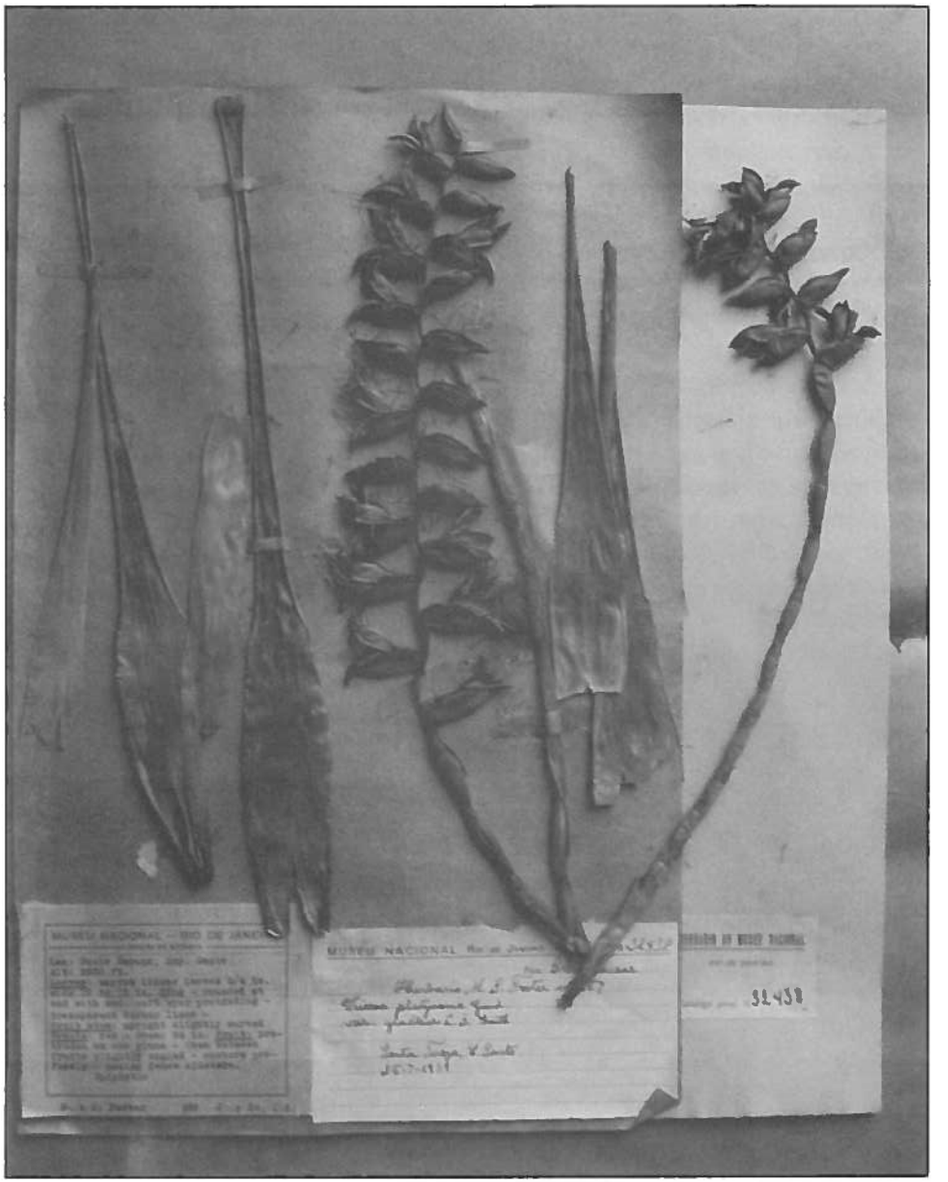


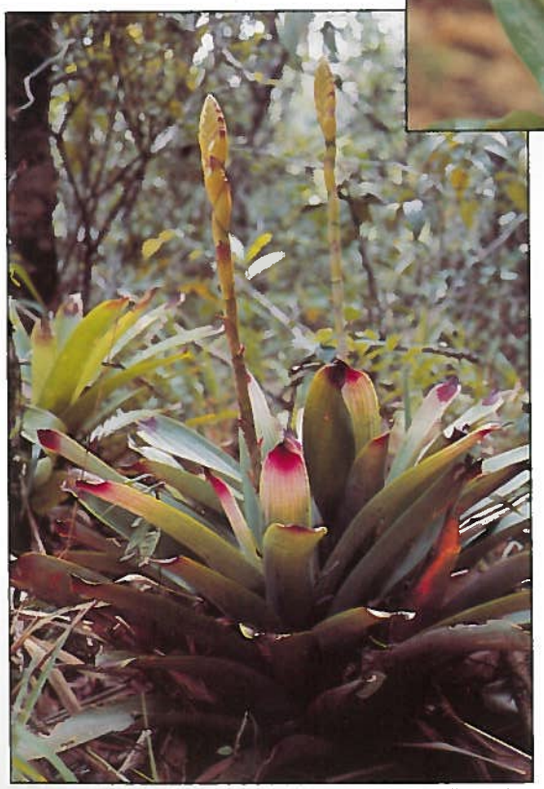
Figure 13
Isotype of *V. platynema* var. *gracilior* collected by Mulford and Racine Foster in 1939 and on deposit in the herbarium of the Museu Nacional of Rio de Janeiro.

***Vriesea gracilior* (L.B. Smith) Leme, stat. nov.** Basionym: *Vriesea platynema* var. *gracilior* L.B. Smith, Arq. Bot. S. Paulo 1 (5):121; 1943.

Plant epiphytic, lacking rhizomes, flowering 40–50 cm high. *Leaves* ca. 15, erect or suberect, forming a narrow, funnelform rosette; *leaf sheaths* narrowly

Author

Figure 14
Vriesea gracilior specimens newly collected by the author in the vicinity of Domingos Martins in the state of Esplrito Santo.



Luiz Claudio Marigo

Figure 15
Vriesea platynema var. *variegata* before reaching full bloom.

elliptic, 10–12 cm long, ca. 5 cm wide, very inconspicuously but densely brown-lepidote on both sides, slightly purplish inside, dark brown at base outside; *leaf blades* linear, not narrowed at base, apex rounded and conspicuously apiculate, 15–30 cm long, 2.5–3 cm wide, green with irregular dark green, translucent cross-bands, glabrescent. *Scape* erect, 30–37 cm long, 3–4 cm in diameter, red; *scape bracts* oblong-lanceolate, acute and apiculate, ca. 4 cm long, ca. 1.8 cm wide, red, glabrous, exceeding the internodes and clasping the scape, imbricate, the upper subinflated. *Inflorescence* simple, erect, usually few flowered, lax, 8–25 cm long, ca. 5.5 cm wide; *rachis* slender, flexuous, slightly angled, red, 2–3 mm in diameter. *Floral bracts* broadly elliptic to orbiculate, very broadly acute and apiculate, 22–30 mm long, 20–25 mm wide, glabrous, ecarinate, without decurrent auricles, enfolding the flowers, slightly shorter to equaling the sepals, nerved at apex, the basal one red near the base and yellow toward apex, the upper yellow throughout; *flowers* ca. 30 mm long, distichous, spreading at anthesis and after; *pedicels* slender, ca. 10 mm long, 3–4 mm in diameter, yellow; *sepals* obovate, subacute to obtuse, 20–23 cm long, ca. 8 mm wide, yellow, glabrous, ecarinate; *petals* narrowly sublanceolate, rounded, ca. 25 mm long, ca. 5 mm wide, yellow, bearing 2 rounded, ovobate 3-mm long scales at base, basally connate for ca. 3 mm; *stamens* included.

Type. Brazil. Espírito Santo, county of Santa Tereza, about 760 m. high, *M.B. & R. Foster 267,* July 26, 1939.

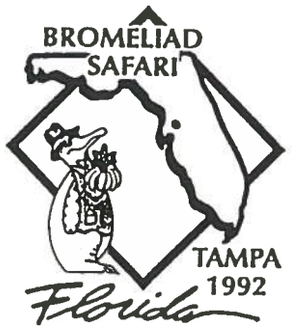
Holotype. GH (n.v.); isotypes: R, SP.

Distribution: Brazil, Espírito Santo: Domingos Martins, hill near the city ca. 800 m. high, Sept. 12, 1990, *Elton M.C. Leme 1604,* Roberto A. Kautsky & Jones C.da Silva, (HB, RB); Santa Leopoldine, Rio das Farinhas, property of Alberto Schafler, ca. 1,000 m. high, February 1991, *Antonio Toscano de Brito 918* & Roberto A. Kautsky, (HB).

Vriesea gracilior can be differentiated from *V. platynema* by the following characteristics:

Flowering size not higher than 50 cm; *leaf sheaths* purplish inside; *leaf blades* to 3 cm wide; *scape* to 37 cm long; *inflorescence* 8–25 cm long, usually few flowered; *rachis* slender, 2–3 mm in diameter, red; *floral bracts* to 30 mm long, without decurrent auricles, almost equaling the sepals; flowers spreading at anthesis and after, about 30 mm long; *pedicels* slender, 3–4 mm in diameter (in life); *sepals* to 23 mm long; *petals* narrowly sublanceolate, ca. 25 mm long, ca. 5 mm wide.

Rio de Janeiro, Brazil



BROMELIAD SAFARI

10TH WORLD CONFERENCE
JUNE 11 - 14, 1992
TAMPA, FLORIDA

Dear BSI Members: 1 November 1991

As the Holidays approach, we hope that you will find lots of Safari clothes and gear under your Christmas tree! The Florida natives are planning to give prizes to five of the BEST DRESSED SAFARI DELEGATES at poolside on Thursday evening, June 11, 1992. They will be selected by a panel of *non*-BSI judges.

With 1992 just around the corner, don't delay sending in your registration. Regular registration is $120.00 per person until April 1, after that date the fee will be $145.00 per person.

Your registration to the 1992 WBC includes:

- Poolside dinner party with entertainment on Thursday evening, a sneak preview of the judged bromeliad show, entry to the plant sales area on Friday morning before it is open to the public.

- Home tours on Friday or Saturday morning. After breakfast, buses will be waiting to take you to the homes of Dr. and Mrs. Pat Patterson, Dr. and Mrs. Burns Creighton, and Mrs. Alise Catlett.

- Attendance at any of the daily seminars on bromeliad culture and related subjects, the rare plant auction, honorary trustees tea and crumpets reception, cryptanthus auction, judged plant show, the sales area (all three days), and the banquet.

Because the Tampa Bay area offers so many attractions for the family, we encourage you to bring your children. Those 16 and under may register for $45.00. That fee includes the poolside party, banquet, auctions, show, and sales area. The home bus tours will cost an additional $15.00 per child. We think that your children will enjoy the spacious suites and beautiful pools at Saddlebrook as well as Busch Gardens and Disney World.

Room reservations at Saddlebrook Golf and Tennis Resort will be made on a first-come, first-served basis. Rates are guaranteed until April 1, 1992. This beautiful resort is the home of the Harry Hopman Tennis School with 37 tennis courts. It has two challenging 18-hole championship golf courses designed by Arnold Palmer. For our conference, Saddlebrook has reduced its regular room rates by one-half! You may make your reservations by calling toll free 800-729-8383 and guaranteeing one night on your credit card or by check. Should you

(continued on page 271)

New Book

Bromeliads for Everyone, by Bea Hanson. Rev. ed. Auckland, N.Z.: Capilano River Press, 1991. 64 pages, illustrated; N.Z. $14.95 softbound. ISBN 0473 01274 X.

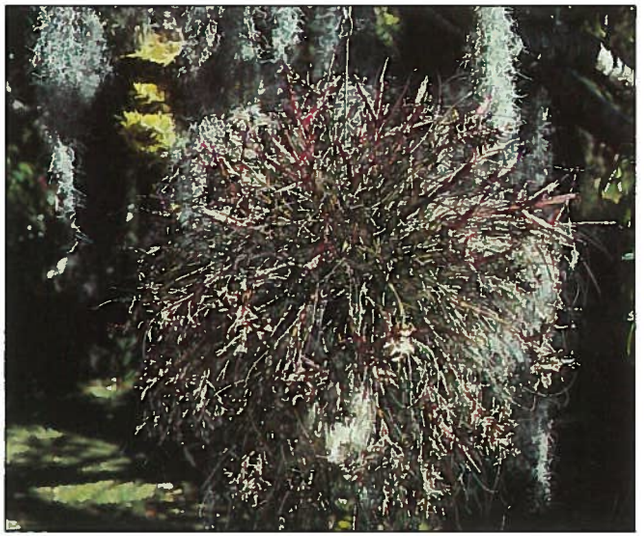
This basic instruction book includes 21 chapters on bromeliad genera, chapters on general information about culture, growing from seed, how to make a bromeliad tree, and an index. It is a revision of the author's 1970 edition. There are 10 identified color photos and 18 black and white drawings, some identified, some as decorations. Each chapter about an individual genus lists and describes only a few of the best known species (and a very few named hybrids).

Mrs. Hanson says that this book is "definitely for beginners as I still feel there's not much that is easy enough for them to follow." After editing the *Bulletin* of the Bromeliad Society of New Zealand for more than twenty years and instructing beginners for longer than that, she understands their problems and anticipates their questions. We have all at some time during a local society meeting heard someone ask a question and then heard several authoritative answers given in reply. The resulting confused reaction is the justification for a book such as this: for beginners who are intelligent people learning both about the plants and the vocabulary.

This is a book that you can learn from easily. You can think about the answers and reason for yourself how they might apply to your own part of the world. There are always minor difficulties with product names but you are supposed to select fungicides, bug killers, fertilizers carefully and to read the labels regardless of the name the manufacturer applies. "Ponga" is a favorite word among New Zealand bromeliad people and on page six we learn that it is a kind of tree fern. Mystery solved.

Order from: Mrs. Bea Hanson, 279 Wellington Highway, Panmure, Auckland 6, New Zealand. You will have to ask her to tell you the postal rate for single or multiple copies to your address. Payment may be made by international money order or bank check payable in New Zealand dollars (with the present exchange rate you will find a bargain). Ask the author for quantity prices.—TUL

Regional Reflections



Author

Figure 16
Tillandsia butzii

***Tillandsia butzii* in Auckland** has been thriving with Harry Martin's care 15 years. In a recent letter he reports: "The plant lives outside on the peach tree in all weathers. The heap is a good two feet overall. It gets a light dusting of frost in the winter although we have not had anything much this year—so far. The plant flowers at odd times, in fact there are buds on it right now in midwinter. The white patch that you can see on one side is, of course, seed. Some of it has germinated and there are tiny seedlings in the interstices between the individual plants. A more accommodating tillandsia would be hard to find except perhaps for Spanish and ball mosses. As a matter of interest, our average annual rainfall is 50 inches. It is spread over nine months, that is, autumn, winter, and spring, so summer hosing is no great chore."

Harry Martin
25 Cockayne Crescent, Sunnynook
Auckland 10, New Zealand, 28-7-91

Mr. Martin is an honorary trustee of the society.

Tillandsia Wreaths

I'm enclosing a slide and photo of a little wreath I concocted last Christmas (back cover). The tillandsias used were: *T. butzii, baileyi, caput-medusae, ionantha, bulbosa, flexuosa, seleriana,* and *streptophylla.* I used pine cones and

artificial red berries for color and contrast. I used a styrofoam form tied to a metal wire form with fishing wire, tied everything on with fishing line and used clear silicone compound for glue. It turned out great and made a lovely addition to our decorations in the house during the holiday season.

Judy Showers
From a letter to the editor of the Journal.

The 1987 December issue of *Sunset* magazine had a very nice article on making wreaths utilizing tillandsias. My neighbor read her magazine before I got home from work and the moment I walked in the house my son gave me the message that she wanted to talk to me about "something." We read the article together and went immediately to a craft store to find the materials needed. To our surprise, the branch wreaths that are so popular are not cheap. We purchased several, however, to large ones and several little ones.

With wreath in hand, tillandsias from my collection, and even a few small stoloniferous neos, wet sphagnum moss and telephone wire, we were able to create delightful wreaths as suggested in *Sunset* to hang on our front doors and doors of our friends during the holiday season. When I remove the Christmasy bow, I think I will leave the wreath intact, keep the plants in good health so all I will have to do next Christmas will be to attach a new bow. Make several of them for your patio or front door. They are very attractive.

Karen Garkow
Condensed from the Bulletin of the Long Beach-Lakewood Bromeliad Study Group, Lakewood, CA, January 1988 by way of the Tarrant County (Texas) Bromeliad Society Newsletter, *Nov. 1988.*

So here are two methods of making decorative arrangements for your own pleasure without having to worry about what the judges will say.—TUL

Bromeliad Safari *(continued from page 268)*

have to change your plans you may cancel at no cost up to 48 hours before arrival time. The rates for rooms and suites are listed in our ad on page 280.

We hope that you will get everything on your Christmas list including a registration to the 1992 World Bromeliad Conference.

Tom Wolfe, Chairman

Bromeliads Need Hanging

Not that they have committed a hideous crime or even stolen a horse. They need **air movement** around and through them. Those such as billbergias, aechmeas, and other tank types don't need as much air movement but the epiphytic or xerophytic types need the air movements to move moisture and dissolved nutrients for the trichomes to catch and funnel into the interior of the leaf for subsistance. If the plant falls to the ground and is not picked up it will slowly die from lack of air movement.

It is exceedingly difficult, if not impossible, to keep these plants alive under glass. A lot of seedlings are lost by keeping them under glass too long. The seeds should be removed as soon as the second leaf appears. this is why good fans are necessary in a greenhouse.

Hanging saves much bench space and is the best way to view the beauty as the bloom can be at eye level or above. In general, this type of display can increase the aesthetic appearance of the plants—more jungle like. Hanging can be a treatment for many ailing bromeliads without any other change in culture a substantial improvement should be apparent. The aeration increase is like giving the plant a shot of tonic and offsets the effects of over watering and poor drainage.

The plants can be cascaded by hanging one under the other. Cut a separated wire pot hanger approximately in half, recurve the upper end for hanging on the hanger above (See Diagram "A".).

I have my tillandsias mounted on grapevine using a short wire attached to a small staple (See Diagram "B"). Place another staple at the bottom to hang the next vine. I also punch a small hole at each end of a split plant tag (cut in half lengthwise) and run the wire through the holes to hold the name tag in place.

We have named our home "Hanging Downs" because we have so many hanging plants. "Hang in there" with your happy bromeliads.

Stan Oleson, California

Mr. Oleson, who was a BSI director for many years, died January 15 this year.

Questions & Answers

Conducted by Derek Butcher

All readers are invited to send their questions and observations about growing bromeliads as a hobby to the editor. Answers will be sent directly to you and some questions will be published.

Q. What is the best kind of pot to use for growing bromeliads and what size should I use?

A. The first choice is between plastic and clay (glazed or unglazed) pots. Plastic pots come in many textures, thicknesses, and colours, and they are generally cheaper than clay pots. they are easy to clean and to store, and they don't break easily. You have to be careful about watering plants in plastic pots. Since they are not porous they retain the moisture in the potting mix. You must also know that black pots tend to absorb heat and that light-colored pots will encourage algae to grow on the inside. Neither condition is bad in itself but either may be disadvantageous.

Unglazed clay pots tend to dry quickly because they are porous. For this reason the plants require more attention. They will collect lime deposits because of the leaching and they seem to encourage algae growth. On the other hand, they are more decorative than most plastic pots, they don't tip over as easily.

Glazed pots are not recommended for other than display because they won't let water evaporate. You may use them as cachepots, of course.

The shape of the pot is important because we want the plant to remain upright. One easy way to avoid tipping is to add ballast in the form of crocks or pebbles. These also help with drainage. If you are concerned with appearance you will want to match the pot to the plant to avoid the dreaded "over-potted" or "under-potted" declarations by some judges; you will want to think about balance.

Finally, the choice of pot size depends on many factors. If the plants are kept out of doors and there are heavy rains, you may want small pots with minimum mix. If you can control the weather you won't have that problem. Some bromeliads just do not have large root masses and don't need large pots. Kathy Dorr wrote not long ago[1] in favor of large pots for many species to give the roots room to expand. If you have many plants and not much space you will end up making another compromise between what you would like to do and what you can do.

[1] J. Brom. Soc.: 35:176–177.

Q. What is a bromeliad hybrid?

A. The basic definition is: the offspring of two plants of different varieties, species, or genera. Whenever I want to refresh my memory on this interesting subject I refer to David Benzing's *The Biology of the Bromeliads*. Some growers may say that this book is too complicated and yet I would make it compulsory reading for any prospective hybridist. The problem is that bromeliad hybirdizing is easy to do and, by way of paradox, easy for the hybridist to forget to tell others what he/she has done.

All hybridizers should be aware of plant genetics and understand the need to preserve the current gene pool and not splash it around so that eventually we will have so many look alikes, particularly in *Cryptanthus* and *Neoregelia* hybrids. Just about anybody can scatter ripe pollen on receptive pistils. There should be an attempt made before that act to decide if the potential product will be worthwhile or just another sorry mixed-up mongrel.

May I make a plea that we slow down on the hybridising and that we ruthlessly cull unwanted, unsatisfactory, and weak offspring? If we do get a good plant that is truly an improvement over either or both of its parents, we should brag about it, give it a name, and register it. "It" does not mean the entire seed batch. "It" means the solitary, selected product: the cultivar. Registrar Don Beadle, P.O. Box 81464, Corpus Christi, Texas 78468 will supply the registration forms.

Seed from hybrid plants should be identified with the names of the parent plants. Seedlings from a hybrid source cannot be named the same as the parent.

We are all part of the problem so let's all take the trouble to learn the rules. We will then be able to talk sensibly about hybrids and to act responsibly.

CHECKLIST OF BROMELIAD CULTIVARS AND HYBRIDS PRICE INCREASE:

We are sorry that postal rates force us to increase the price of the *Checklist* from $20.00 to the amounts shown:

		From	To
United States	airmail	$20.00	$23.00
Canada and Mexico	airmail	$20.00	$24.00
All other countries	airmail	$20.00	$28.00
	surface mail	$20.00	$24.00

There is no change in price for U.S. 3rd class or Canada and Mexico surface mail.

Minutes of the Annual General Meeting of the Bromeliad Society, Inc., New Orleans, Louisiana, 15 June 1991.

President Jack Grubb called the meeting to order at 9:00 a.m. There were no proxy votes received or business proposed in person. The meeting was adjourned at 9:05 a.m.

Respectfully submitted,
/s/t/ Thomas W. Wolfe, Secretary

NOTE: *A digest of the minutes of the 1991 meeting of the BSI Board of Directors follows:*

Digest of Minutes of the Annual Meeting of the Board of Directors of the Bromeliad Society, Inc., New Orleans, Louisiana, 15 June 1991

The president called the meeting to order at 9:15 a.m.

Officers and directors present:

Don Beadle	Geoffrey Johnson
Tim A. Calamari	Thomas U. Lineham, Jr.
Mark A. Dimmitt	Thelma Mean
Sharon Garcia	Frank Messina
Jack B. Grubb	Polly Pascal
Linda Harbert	Jerrold A. Robinson
Odean Head	Charlien Rose
Clyde P. Jackson	Thomas W. Wolfe

Absent: Dutch Vandervort

Excused: William E. Frazel, Enrique Graf, Albert M. Hodes, Maurice Kellett, Jaqui Watts.

1. **Preliminary matters:**

a) A moment of silence was observed in memory of Racine Foster, Stan Oleson, Fr. Raulino Reitz, and Velva Wurthmann.

b) The president welcomed new board members Sharon Garcia, Thelma Mean, Frank Messina, and Jerry Robinson.

2. The minutes of the 1990 meeting were approved without change.

3. **Officer's reports.**

a) President.

(1) An agreement in principle among the Bromeliad Society, Inc. (Jack B. Grubb), the Marie Selby Botanical Gardens (Larry G. Pardue), and the Mulford B. Foster Bromeliad Identification Center (Harry E. Luther) was accepted. The essence of the agreement is that in the common interest of promoting and maintaining public and scientific interest in bromeliads the BSI will continue to raise funds for the BIC, the BSI will be the treasurer of such funds, and the BSI treasurer will disburse such funds to the director, BIC, on demand and without question.

(2) The Bromeliad Society of South Florida gift of $10,000 to the Victoria Padilla Memorial Bromeliad Research Fund was accepted with thanks.

(3) The Bromeliad Society/Houston gift of $5,000 for research purposes was accepted with thanks.

b) Vice-president. A written recommendation by William E. Frazel to provide for a BSI hospitality and publication sales table at the 1992 World Bromeliad Conference was approved.

c) There was no report by the secretary.

d) The reports of the treasurer, membership secretary and editor were accepted.

4. **Standing committees.**

a) The reports of the several chairmen were accepted. Particular note was made of:

(1) Cultivar registration. Don Beadle announced the publication of a preliminary checklist of cultivars and hybrids.

(2) Judges Certification. Polly Pascal's resignation was accepted.

(3) Seed Fund. Harvey C. Betlz was commended for his conduct of this activity.

5. **Special committees.**

a) Affiliates Liaison. Tom Wolfe's proposal that the BSI donate the Foster and Hobbs awards to affiliates conducting standard shows as a means of improving participation was approved.

b) Bromeliad culture booklet. Mark Dimmitt was authorized to draft an illustrated booklet of about 40 pages to guide hobbyists in the culture of the major genera. He was instructed to submit a draft to the officers for approval with the goal of completing the publication for sale at the 1992 world conference. An appropriation of $12,000 (with 10% overage) to purchase 20,000 copies was approved.

c) Nominations. No slate was presented.

6. **New business.**

a) There being no slate of officers and committee chairmen, the agenda was set aside in favor of the following actions:

(1) dismissal of Mr. Vandervort as chairman of the Nominations Committee.

(2) election of John Anderson of Corpus Christi, Texas, to be chairman of the Nominations Committee with instructions to present a slate at the next regular meeting.

(3) Election of Geoffrey Johnson to chair the Judges Certification Committee vice Polly Pascal, resigned.

b) Tom Wolfe's motion to create a Hall of Fame Award failed in recognition of the priority of the BSI honorary trustees.

c) Honorary trustees:

(1) Mr. Ed Hummel and Mr. Charles A. Wiley were elected honorary trustees in posthumous recognition of their contributions.

(2) The editor was instructed to publish a list of all honorary trustees annually in the *Journal.*

d) The membership secretary was instructed to prepare a membership directory for 1992 to be distributed with the fifth issue of the *Journal.*

e) The membership secretary was authorized to improve the computer capability of her office as necessary. An appropriation of $2,000 was authorized for that purpose.

f) The 1991/1992 budget, as amended, was approved.

g) A general endowment fund was established for memorial gifts.

h) Odean Head moved to authorize the president to accept the San Diego Bromeliad Society's request, if offered, to host the 1994 World Bromeliad Conference. Approved.

i) The standing rules of the bylaws were amended to provide for any case in which there is only one qualified nominee for the office of director: **Standing Rule 5, par. 5.** The president shall announce the election results *including the name(s) of any nominee(s) for uncontested directorships (as in paragraph 2c above)* in the next available issue of the *Journal,* notify the candidates of the results. (See Standing Rule 3, par. 2h).

7. **1992 annual meetings.** The 1992 annual general meeting and annual meeting of the Board of Directors will be held on Wednesday, 10 June 1992, in Tampa, Florida, in accordance with the provisions of Article VII of the bylaws.

8. The meeting was adjourned at 5:20 p.m.

BROMELIAD SAFARI

10TH WORLD CONFERENCE
JUNE 11 - 14, 1992
TAMPA, FLORIDA

FEATURED SPEAKER:
Harry E. Luther, Director
Mulford B. Foster Bromeliad Identification Center,
Marie Selby Botanical Gardens, Sarasota, Florida

CONFERENCE HIGHLIGHTS:

* JUDGED PLANT SHOW * SEMINARS * POOLSIDE PARTY * PLANT RAFFLES *
* PLANT SALES BY FOREIGN & DOMESTIC GROWERS * CRYPTANTHUS AUCTION *
* HOME GARDEN TOURS * OUTSTANDING EXPERT SPEAKERS * DISPLAYS *
* RARE PLANT AUCTION * HONORARY TRUSTEES * TEA & CRUMPETS * EXHIBTS *
* EDUCATION * RECREATION * FUN *

* LOCATION -- SADDLEBROOK GOLF & TENNIS RESORT

REGISTRATION DETAILS:

Adult Regular ——$120.00--- per person (Nov. 2, 1991 to April 1, 1992)
Adult Late ————$145.00----per person (after April 1, 1992)
Children 16 & under -$ 45.00---- per person without bus tours (no deadline)
" " " $ 60.00- " " to include bus tours

USE REGISTRATION FORM BELOW--
MAKE CHECKS PAYABLE TO: BGTB WORLD CONFERENCE
MAIL TO: Mrs. Gwen Carnegie, Registrar
1734 Magnolia Rd., Belleair, Fl 34616
Phone: (813) 584-7749

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1000 Saddlebrook Way,
Wesley Chapel, FL 33543-4499
Phone: 1-800-729-8383 -or-
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Fax: 813-973-1312
Conference Rates to April1,1992
Delux guest room——$70.00
(Single, or double occup.)
1-Bedroom Suite——$85.00
(Single or double occup.)
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(Single, double, triple or quad.)

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REGISTRATION FORM:

TENTH WORLD BROMELIAD CONFERENCE

Please make checks payable to: BGTB World Bromeliad Conference
Mail to: Mrs. Gwen Carnegie, Registrar
1734 Magnolia Road
Belleair, FL 34616 Ph.(813)584 7749

Name:_____
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Please list any Bromeliad Clubs to which you belong:
_____
_____

* Direct hotel registrations to Saddlebrook and indicate that you are attending the World Bromeliad Conference to qualify for special rates and a rare plant seedling.

The Bromeliad Society, Inc.

The purpose of this nonprofit corporation is to promote and maintain public and scientific interest in the research, development, preservation, and distribution of bromeliads, both natural and hybrid, throughout the world. You are invited to join.

Judy Showers

Two short descriptions of Christmas wreaths made with tillandsias and other small bromeliads appear on pages 270–271. The wreath shown here was made and photographed by Judy Showers.

Calendar of Shows

9–10 November	Caloosahatchee Bromeliad Society annual show and sale, "Carnival of Bromeliads." Exhibition Hall, corner of Hendry St. and Edwards Drive, Fort Myers, FL. Saturday, 9 a.m.–6 p.m.; Sunday, 10 a.m.–4 p.m. Friday, 8 Nov. 8:30–11 a.m. plant entries, judging 1–6 p.m. Betty Ann Prevatt 813-334-0242, Gene McKenzie 813-997-6392. Open to the public, admission free.
16–17 May 1992	Bromeliad Society of South Florida annual show and sale, Fairchild Tropical Gardens, Miami, FL. Details will follow.
4 June-7 September 1992	"Epiphytic Jewels; Canopy Dwellers of the Tropical Rain Forest," by Ms. Bonnie Arant Ertelt. Museum of Botany and the Arts, The Marie Selby Botanical Gardens, 811 South Palm Avenue, Sarasota, Florida. This show has been scheduled to coincide with the 1992 World Bromeliad Conference.
11–14 June 1992	1992 World Bromeliad Conference sponsored by The Bromeliad Guild of Tampa Bay, Inc., The Florida Council of Bromeliad Societies, Inc., and The Bromeliad Society, Inc.. Saddlebrook, Tampa, Florida. Tom Wolfe, General Chairman, 813-961-1475.

Please send 1992 show and related notices to reach the editor at least 60 days before publication date of the *Journal*. The deadline for March–April 1992 is 1 January 1992.