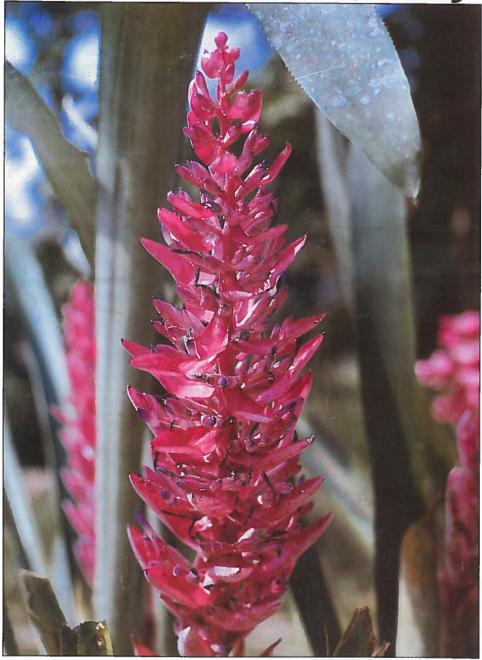
Journal of The Bromeliad Society



**VOLUME 44** 

# Journal of the Bromeliad Society

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January-February 1994

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Cover photographs. Front: Streptocalyx poeppigii Beer (Aechmea beeriana) Smith & Spencer. A photo taken by Lee Moore in 1964. Text begins on page 3. Back: Tillandsia quaquaflorifera Matuda. Photograph by R. & K. Ehlers.

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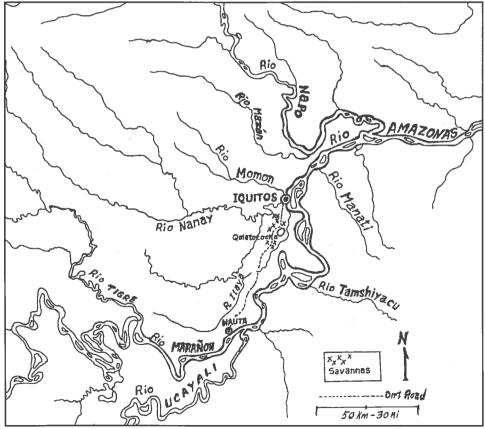
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The first call for 1994 nominations for the office of director, 1995–1996 and 1995–1997 is on page 247 of the 1993 November–December issue. Please read it to determine if your region is listed and how many nominations are due. You are responsible as a member to take part in the nominating and voting process.

# The Bullis Expedition to the Amazon in 1992 Lee Moore Photographs by the author

For several years, just for the fun of it, Harvey Bullis and I had sat around his place in Homestead, Florida, ruminating on the idea of going back to the Iquitos area of Peru to re-collect some of my earlier bromeliad discoveries. Some of those plants have been lost in the shuffle over the years and are not presently available. We considered also the possibility that some had been overlooked in more recent years.

It was in February of 1992 that Harvey decided to send his daughter-in-law, Patricia (figure 3), in his place on this expedition that we had planned for so long. I organized the expedition with Patricia to be accompanied by veteran collectors Jack Dammann of the Virgin Islands, Wayne Pence of Ohio, Ken Tokach of Washington State, my wife Chady, and me. Our purpose was to search for new varieties of *Aechmea chantinii* that had not been introduced into the industry as well as other species that I had found 35 years earlier.



Sketch map of the area around Iquitos, Peru, visited by the Bullis Expedition in 1992.



Figure 1. Streptocalyx poitaei Baker (Aechmea poitaei [Baker] Smith & Spencer.)



Figure 2.

Streptocalyx holmesii Slingerland, a synonym of Aechmea woronowii Harms. The species was named for Jack Holmes of Tampa. The Peruvian form of the species is orange and red, called "Fabulous Orange (see note 2), while the Ecuadorian variant is usually red and white. [H.E.L.]



Figure 3. Patricia Bullis with a new-found friend.

We flew from Miami to Iquitos. Once there, Chady and I needed only a couple of hours to put everything together. No prearranged programs or reservations were needed since we knew Iquitos and the key people there. It would be easy to do in our usual way—play it by ear. Within an hour, we had obtained all that was required including a motor canoe, tree climbers, lodging, and the like. Supplies and staples would be obtained the next morning in the market.

The trip on the Río Manati began with a hot day. The canoe did not have a thatched palm cover and that was our first mistake. All of the veterans burned in the hot sun but our novice, Patricia, came equipped with sun screen. The situation was corrected as soon as we returned to Iquitos after our first day on the river. I then had our boatman, Mario, build a thatched palm roof.

On that first day on the Manati, we found many species of Streptocalyx such as poeppigii (front cover), poitaei (figure 1) and longifolia. Neoregelia eleutheropetala var. concolor plants were everywhere in the draping foliage; Aechmea tessmanii and A. tillandsioides were in great quantities and A. mertensii with its ant nests hung like a plague from the trees—always ants. It was hard going in the 104° F (39° C) heat. Everybody was excited by these discoveries even though we had not found what we came for. So many of the great trees that abounded during my earlier collecting days were now gone, chewed up by chain saws and eaten by the local sawmills to make furniture, lumber, firewood, and the like. Others had just been destroyed to clear the land for local produce. I knew that I had to do better than this as a guide if the trip was to be successful.

So, I decided to take the group up river to the Río Tamshiyacu, which goes inland toward the Brazilian border. I used to know the place but since so much had changed I could not be sure. It was to be a long trip requiring an overnight

stay before returning to the comfort of a hotel. As we began the long journey, we could see the bufeo (fresh-water dolphin) rolling over in the muddy waters of the Amazon.

I told Patricia that we would probably have to stay overnight but that I had no specific place in mind. We would just take what we might find. At the end of the day, I just look for a place to swing a hammock and always find it. The river people are always friendly and welcoming. Patricia had come prepared with a jungle hammock and other paraphernalia. She was loaded for bear (if any). There were no bears but plenty of bats, spiders, and beetles with horns. Few mosquitoes. Mosquitoes are never a big problem in the jungle.

It was becoming twilight that day and all, except I, were getting a bit apprehensive about what we were going to do about the coming night so far from civilization. In the equatorial zone there are only about 30 minutes of twilight and then the light fades quickly. Then, around the next bend, we found a couple of thatched structures. Patricia was a good sport and ready to accept the adventure.

After landing, I jumped into the river, clothes and all, to cool off and wash away the sweat of the day. The pirhanas didn't object but my companions preferred not to follow my example. We were accepted graciously by these river people into one of their buildings. Then, as darkness fell, we strung Patricia's hammock between the rafters (where the tarantulas would be hiding). The rest of us took the available bunks since we had no hammocks.

After a dinner of fish and chicken prepared by the master of the manor under flickering kerosene light, we advised Patricia NOT to keep her oil tin burning during the night but to sleep in the darkness, just as the rest of us would be doing. (A kerosene tin is a small Nescafe can with a cloth wick protruding from a soldered spout. All the river people use such for night lights except for those who can afford a Coleman or Petromax lantern). We knew the consequences of burning the lamp, but she didn't. She insisted on having the light. We then all settled down in our bunks, not far from her hammock, to await the screams that were sure to come.

The welcoming light succeeded in attracting all manner of insect, vermin, and creeping things that insisted on crawling on the illuminated netting of the state-of-the-art hammock. Bats then swooped in to grab the assembled insects, and the spiders came along for their share. The eeeks and squeaks of Patricia harmonized with the noises of the jungle but the rest of us slept tranquilly in the darkness. The next morning, we all had a good laugh about her initiation. In the coolness of the morning mist, we had a breakfast of turtle eggs and baked bananas supplied by our host.



Figure 4.
Victoria amazonica lilies,
as well as piranhas, occupied
our bathing pond.

Behind this hamlet was a small pond, called a "cocha," in which we bathed close to the shore among giant *Victoria amazonica* lilies (figure 4). We were offered the skin of a 30-foot anaconda (figure 5) that our host Anastosio Enrique Lopez Sol Sol had killed there. He had used ten feet of the hide to make shoes and other things for his children. But, on to the next adventure.

The Tamshiyacu was very productive. We found the *Aechmea* that I call "Amazon Queen" (figure 6). The trees overhanging the river were dripping with all kinds of beautiful things. *Aechmea hoppii* was a welcome addition. But still not what we were looking for. There was no scarcity of the common species that I mentioned before. The guzmanias and or tillandsias were uninteresting because they were without color. One still eluded us: *Streptocalyx holmesii*.

We finally found our plant on the Río Momon, where I predicted it would be and where I had found it before as well as along the Río Napo (but that river

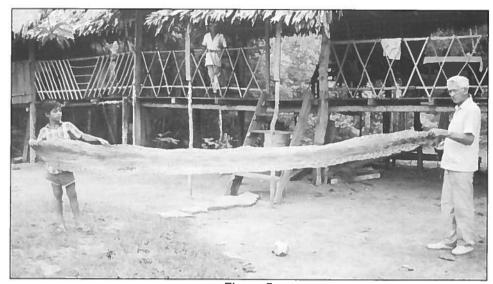


Figure 5.

Jack Dammann and friend display 30 feet of anaconda skin. The buildings are elevated to avoid flood waters and to keep the fer-de-lance out. Note the nice touch of the table cloth (upper right background).



Figure 6.
Lee Moore and Mario display a new variety of Aechmea chantinii that Lee calls "Amazon Queen."
The loss of the color slides is especially to be regretted in this case.



Figure 7. Streptocalyx holmesii attached to a tree felled for firewood, near Río Momon.

was too far away). Still, the Momon sort of parallels the Napo near Iquitos so I thought it worthwhile to try there.

On the Momon we encountered a group of timber cutters looking for firewood. When we heard the chain saws, we decided to investigate because that always means felled trees and the things that grow on them. There we found endangered species on the ground. Cattleya luteola and many others were on the trunks among the Streptocalyx poeppigii tangled like grass in the rubble. Fortunately for us, there were a few of the Streptocalyx holmesii (figures 2 and 7) on the ground but many still on the trees that were too large for the cutters' purposes. Up went our climbers with their machetes to bring down a few specimens. All were laden with seed. Success!

Further up river we found a few more specimens of *Streptocalyx holmesii* and several other interesting species. We found the usual forest creepies inside the bromeliad clusters as we hauled them into the canoe: scorpions, tarantulas, and the like. One tarantula jumped out at Patricia. Jack and I tried to show her that is was harmless (figure 8) but she would have none of it and so we sent it home into the trees. One small tree boa was found curled up in the branches.

We saw that even the firewood cutters contribute to the destruction of the forest and its creatures. They offered to sell us a baby three-toed sloth whose mother they had killed instead of letting her go back into the trees. We were prohibited by CITES regulations from collecting and protecting endangered species,



Figure 8.
Lee Moore playing with a tarantula that came running out of a large Streptocalyx holmesii.

while they are being destroyed through the ignorance of the local people. I will spare you my raving.

After the river trips, I took everyone on a journey by pickup truck into the inland sand country to explore a road that is being pushed into the jungle toward Nauta to develop the land. Years ago, near Iquitos, there were great patches of *Aechmea nidularioides* along the side roads in the savannas. Now the land has been developed and the plants are gone. I was sure we would find some further on and we did in the sandy, highland forest patches. Along the way we found one tree on the roadside with a very large cluster of *A. moorei*.

We took a few specimens and moved on. (A year later I went through the same area. The tree was gone and so were the A. moorei plants).

The rest of the trip produced Guzmania lingulata and a spectacular Streptocalyx with short, thin leaves and a bright red cone-shaped inflorescence that has not yet been identified. After the last day, we went back to the hotel to view the video that I had recorded throughout the trip and watched ourselves having fun on the Amazon. The following day, Patricia and Chady left for Lima while the rest of us went on to Moyobamba to begin a second expedition, but that is another story.

The sad postscript to this account is that Hurricane Andrew carried away all of the plants and great things that we had found on this expedition. Even the 35 mm slides were lost. The only exceptions were the color negatives and a tray of *Streptocalyx holmesii* seedlings that Patricia had tucked away in her closet before the storm.

Miami, Florida

#### NOTES:

- 1. a) Lee Moore, The kingdom of the Pink Goddess, Brom. Soc. Bull., Jan.-Feb. 1963, pp. 13:9-13.
  - b) Lee Moore, Adventurer; Man of the year, Brom. Soc. Bull., Mar.-Apr. 1964, pp. 33-34.
  - c) Excerpts from the diary of Lee Moore, Brom. Soc. Bull., Mar.-Apr. 1964, pp. 35-40.
- d) Slingerland, Harold, Peruvian discovery, Brom. Soc. Bull. May-June 1964, pp. 51-58.
- 2. The 35 mm color slides reproduced here were taken by the author in 1964 and 1965. Streptocalyx holmesii, S. poeppegii, and S. poitai pictures were printed in various issues of the BULLETIN in 1964, 1965, and 1972. Those issues have become very scarce. There is a good picture of Aechmea hoppii on the back cover of JOURNAL, January-February 1991.
- 3. See Journal 43:157–159 for "Reduction of Streptocalyx," by L.B. Smith and M.A. Spencer. The text of this report has not been revised to show those changes in nomenclature.
- 4. L.B. Smith on page 1861 of the monograph says: "Aechmea woronowii Harms. [syn.] Streptocalyx holmesii Slingerland, Brom. Soc. Bull. 14:53 (color plate, 1964; J. Holmes, Brom Soc. Bull. 15:39 (color plate), 1965; nomen. Based on Lee Moore s.n., vicinity of Iquitos, Loreto, Peru, cultivated Marnier-Lapostolle 34 (US), Jan. 1967."

## NOTICE: AFFILIATED SOCIETIES, MEMBERS, AND ADVERTISERS

The Bromeliad Society, Inc., as a nonprofit organization is qualified by the United States Postal Service to mail at the special nonprofit rate. There are, however, various restrictions. The following notice from the USPS Central Florida Customer Service District, dated 5 November 1993, concerning those restrictions is quoted for your information:

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If a mailing has inserts from organizations not authorized for the special nonprofit rates or advertistements for any of the above-listed advertisements, the mailing can only be accepted at the commercial bulk mail rates."

# **Information for Bromeliad Judges**

### CHANGES IN HANDBOOK FOR JUDGES ARE ANNOUNCED

On 6 May 1992 in Tampa, Florida, the Judge's Certification Committee made the following HANDBOOK revisions.

1. Page 5 #7f. will now read:

To be eligible to win any of the aforementioned BSI Major Awards the entry should be properly named (genus species, variety, form, or cultivar, if applicable) at the time of entry and classification, not when major award judging is in progress. Additionally, the entry must score 95 or more points and must be one of the following: 1) an identified species; 2) a hybrid in the 1991 Preliminary Listing Of All Known Cultivar and Grex Names For The Bromeliaceae; 3) a hybrid which has been subsequently registered with the Hybrid Registration Chairman; 4) a hybrid listed by formula.

2. Page 7 #1a is an addition: Bases will be allowed with Decorative Containers.

#### SCHOOLS FOR BROMELIAD JUDGES

All persons interested in attending Judging School at the 1994 World Bromeliad Conference should write to either

Geoffrey C. Johnson 3961 Markham Woods Road Longwood, FL 32779

OR

Joyce L. Brehm 5080 Dawne Street San Diego, CA 92117

The Louisiana-Oklahoma-Texas District is planning to begin the 4th series of BSI judging schools. The first school will be held on 19 February 1994 in Houston, Texas. For information write or call Valerie Steckler, 8301 Millway Drive, Austin, Texas, 512-451-7460.

# The Best of the Best, 1991–1992 Valerie Steckler

Many societies affiliated with the BSI stage standard shows every year. Truly outstanding plants, artistic arrangements, and plants in decorative containers compete for both medallions and the prestigious "Mulford B. Foster Best of Horticulture Award" and the "Morris Henry Hobbs Best of Artistic Award." Many slides of top award plants are sent with the individual show reports to the chairman of the Affiliate Show Committee. If your society is not mentioned here, it could be that your Awards Committee chairman did not send the slides and show report to the Affiliated Shows Committee as required by par. 6b, page 5 of the Judges Handbook.

The purpose of asking for reports is to record the best of the best and to show pictures of as many of them as possible. The color slides should be 35 mm (preferably Kodachrome and not print) film of the best show entries with the most complete information possible including the photographer's name. When photographing show plants, be careful to use a black background or at least something that is not distracting like a wrinkled sheet. Avoid a large white space, award ribbons, and entry tags. Center the subject, and fill the frame. In addition to the Foster and Hobbs Awards slides, we would like to have slides of show division and section winners as well as rarely seen or newly introduced bromeliads. These are used to teach point scoring at schools and symposia for judges.

The first Best of the Best in this report was a truly impressive entry. Neophytum 'Galactic Warrior' (figure 9) won the Foster Award at both the October 1992 Southwest Guild Show in Houston, Texas, and at the Houston Bromeliad Society show the following May, a rare occurrence. Lou Trahan, the owner, who lives near Lafayette, Louisiana, got the plant in July 1990. The plant was four inches tall and four inches in diameter. She put it in an eight-inch bulb pan in her regular mix and added one tablespoon of Osmocote time-release fertilizer. That was the only time it was ever fertilized. It is now twenty-four inches in diameter and has three-quarter inch leaf bases. The plant grows up high on a pot hanger in a lath house without shade cloth. Lou's secret to growing impressive orthophytums and neophytums is thorough and frequent watering.

Bob Spivey once again won the Foster Award at the 1992 Shreveport (Louisiana) Regional Bromeliad Society show with a *Guzmania* hybrid (figure 10) that he calls "Attila" (*G. wittmackii x dissitiflora*). Nothing is more graceful and beautiful than the silhouette of this guzmania with its arching leaves. The grower has the distinct advantage of having a greenhouse with a wet wall to control temperature and humidity. The plant receives medium to



Figure 9.
Neophytum 'Galactic Warrior'. A cultivar of X Neophytum Ralph Davis (albomarginated), it was named by Jimmy Antle in 1988.

Figure 10.

Quesnelia "Attila" (G. wittmackii x dissitiflora). This three-year-old plant was hybridized by Bob Spivey of Shreveport, Louisiana.



**Bob Spivey** 

Figure 11. Quesnelia marmorata. A horticultural display exhibited by Wally Berg at the 1991 Sarasota Bromeliad Society show. It is notable both for excellent culture and the choice of mounting medium that provides contrasting angles and color.



Wally Berg



Alex Holmes

Figure 12. Dyckia fosteriana x platyphylla, a multiple. Dyckia growers especially will admire the perfection of these two and one-half-year old plants.

medium-high light, as well as constant air movement provided by the many fans. Bob believes that air circulation is critical to the growth of all bromeliads, especially to vrieseas and guzmanias. The plant is three years old. It is two and one-half feet in both height and diameter. It has been a slow grower but worth the wait.

Wally Berg won the Foster Award at the 1991 Sarasota (Florida) Bromeliad Society show with his horticultural display of *Quesnelia marmorata* (figure 11). The entry is four years old. It has well-coiled and beautifully marked foliage. Wally grows many of his bromeliads in a meticulously clean, neat, shade cloth-covered structure over his patio.

Dyckia Lad Cutak x Carlsbad (an unknown hybrid presumed to have been made by Ed Hummell) as a multiple, blooming plant produced another Foster Award for Alex Holmes of the River Bend (Louisiana) Bromeliad Society to add to his collection. The entry is five years old, two feet in height and two and one-half feet in diameter. The inflorescence is nearly four feet tall. The foliage is a spectacular, almost black, color. This plant grows outside except for the two coldest months of the year.

At the 1991 San Diego (California) Bromeliad Society show, John Arden won the Morris Henry Hobbs Artistic Award with a clump of beautiful, large *Tillandsia leiboldiana* with many inflorescences in a decorative container. The container was attached to a piece of grape wood sandblasted to a beautifully lustrous light tan color that matched it exactly. The height of the base allows the blooms to cascade all around the display.

Barbara Temchuck of River Grove, Illinois, won the Foster Award at the 1991 show held by the Bromeliad Society of Greater Chicago with her multiple *Dyckia fosteriana* x platyphylla (figure 12). The plants are two and one-half years old, each eight inches in height and diameter. This winner started its growth from one sad, little pup with mostly dry, brown leaves at the base and was nurtured into this show beauty. It is grown out of doors during the four warm months and under lights the rest of the year. The plants have never been fertilized, they are watered weekly during the winter but frequently in the summer. This grower agrees that dyckias, like orthophytums, require frequent watering.

Austin, Texas

We are grateful to the officers and members of the Caloosahatchee Bromeliad Society for their generous gift to the JOURNAL Color Fund.

# Aechmea callichroma, A New Species Described from Cultivation Robert W. Read and H. Ulrich Baensch<sup>1</sup>

During preliminary preparation for a book on bromeliads and the requisite verification of identifications, a mysterious and colorful group of plants growing at Tropic Beauty<sup>2</sup> demanded our attention: Aechmea aquilega, A. rubens, A. lanjouwii, and A. mulfordii. All four, included in the now-defunct genus Gravisia, are robust plants ideally suited as landscape subjects in the coastal regions of the tropics and subtropics. With rosettes up to a meter high, and forming large clumps, they produce long-lasting, colorful inflorescences from one to two meters tall. Among the numerous plants of this group at Tropic Beauty, two distinct species had been identified with A. mulfordii at one time or another depending on who the identifier was. This confusion no doubt resulted from the publication of a misleading illustration in the Smith and Downs monograph.<sup>3</sup> It was obvious, however that the plants in hand did not agree with the L.B. Smith description.

Harry Luther recognized the problem when he attempted to identify material sent to the M.B. Foster Bromeliad Identification Center at Selby Botanical Gardens. He tried to make it easier to identify the different plants by preparing an illustrated key<sup>4</sup> to the species. The distinctions remained unclear, unfortunately, because of the distorted illustration of A. mulfordii in the monograph. Furthermore, it was not understood that, as the inflorescence of Aechmea rubens developed, the spikelets came to resemble the A. mulfordii illustration, contributing further to the confusion. Read and Luther corrected this problem in a paper published in Selbyana.<sup>5</sup>

After considerable study and comparison of living material, one taxon stood out conspicuously as distinct and recognizable, with no clear relationship to any known species. That plant, *Aechmea callichroma* Read & Baensch, 6 is probably not of recent hybrid origin because there are no obvious clues to parentage in the complex, and plants of this species have been in cultivation for a considerable length of time. *A. callichroma* is most likely from eastern Brazil but more recently by way of Bob Wilson's Fantastic Gardens in Florida through Stanley Smith<sup>7</sup> to Tropic Beauty.

The name "callichroma," meaning lovely color, alludes to the outstanding and long-lasting colors typical of this species. *Aechmea callichroma* tends to be more like *A. aquilega* in the size and ampulate, or slightly bottle-form, shape of the rosette resulting from the slightly inflated leaf bases and lower portion of the



Fig. 13.

Aechmea callichroma Read & Baensch. A new species described by R.W. Read is shown here in color for the first time. The name refers to the long-lasting colors of this species.

Photos by U. Baensch

Fig. 14.
Aechmea callichroma inflorescence detail.

leaf blade. In similar manner, the leaves normally exhibit a silvery gray coating of mealy scales barely masking the purplish maroon of the leaf surface. The floral bracts, sepals, and petals are bright orange-yellow, contrasting sharply with the red axes and green ovaries. Mature fruits are purplish black.

Aechmea callichroma can be distinguished easily from A. mulfordii by its flowers, which are arranged along a distinct axis, not in tight fascicles or crowded spikelets, and by the large, lowermost primary bract, which nearly equals or is shorter than the stalk supporting the lowermost branch. Also, the floral bracts of A. callichroma are barely longer than the ovary, which is fairly exposed, while those of A. mulfordii are broadly ovate and more tightly congested, thereby mostly concealing the ovary. From A. rubens, this species differs in the much shorter and yellow (not orange or red) floral bracts.

This species is an excellent candidate for landscaping in moderately frostfree areas when used in full sunlight or light shade. The brighter the light the better the form and color. Close relatives are known to thrive on rocks or as terrestrials, frequently with mangroves under saline conditions. Flowering is generally in late spring and remains colorful for a considerable time.

#### **END NOTES:**

- Dr. Read's address is: 272 Rose Apple Lane, Naples, FL 33961; Dr. Baensch's address is P.O. Box N 1105, Nassau, Bahamas.
- 2. Tropic Beauty is the Nassau home of Dr. and Mrs. Ulrich Baensch and the respository of their extensive collection of bromeliads.
- 3. L.B. Smith & R.J. Downs, Bromelioideae (Flora Neotropica monograph no. 14, pt. 3); 1979: 1824, fig. 615 i and j.
- 4. H.E. Luther, Some confused aechmeas (Misnamed bromeliads, No. 6). J. Brom. Soc. 40(4): 154–156; 1990.
- Selbyana 12:54-67; 1991. Copies may be obtained by sending \$2.00 to the author at Quest End, 272 Rose Apple Lane, Naples, FL 33961.
- 6. The description of this new species appears on pages 60–62 of SELBYANA 12; 1991 (see note 5, above).
- 7. Stanley Smith accumulated a large collection of tropical plants in Nassau during the 1950s, many of which came from growers including Robert G. Wilson, founder of Las Cruces Botanical Garden in Costa Rica. He originated and introduced the Lasagne Fern (Asplenium nidus var. plicatum). The Stanley Smith Horticultural Trust was established upon his death. In 1979, his widow sold the bromeliad collection from which Ulrich Baensch acquired a representative of each species.

Nassau, Bahamas

# **Nomenclature Changes**

Michael A. Spencer and Lyman B. Smith published "A Revision of the Genus *Deuterocohnia* Mez" in Bradea 6(16):141–146; 27 November 1992. The abstract follows:

"A review of 13 species in two closely allied genera of Bromeliaceae, Abromeitiella Mez and Deuterocohnia Mez, reveals a lack of sufficiently distinct characters to warrant their separate generic ranks. Abromeitiella is therefore reduced into synonymy under Deuterocohnia which has priority, and new combinations for its 4 species are made. The generic description of Deuterocohnia is emended and a key to the genus is provided."

Mr. Spencer and Dr. Smith published "Racinaea, A New Genus of Bromeliaceae (Tillandsioideae)" in Phytologia (February 1993) 74(2):151–160. The abstract follows:

A re-evaluation of *Tillandsia* subgenus *Pseudo-catopsis* [sic] (André) Baker revealed sufficiently distinct characters to warrant the establishment of a new genus, *Racinaea*. Named in honor of Racine Foster, *Racinaea* is described and discussed, and new combinations are provided for 46 species and varieties.

#### **NEWLY PUBLISHED BROMELIAD SPECIES**

Harry Luther, director of M.B. Foster Bromeliad Identication Center has described several new taxa including a new form, transferred a species, and reclassified another species in the June 1993 issue of Phytologia volume 74(6), pages 449–458. Those concerned are Guzmania kentii, G. rhonhofiana forma variegata, and G. zakii from Ecuador; Guzmania armeniaca from Panama, Pepinia neglecta from Peru. In addition, he has transferred Pitcairnia beachiae to the genus Pepinia and reclassified Pitcairnia pulchella as a variety of P. nigra.

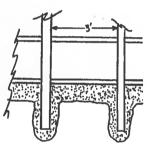
Dyckia excelsa Leme sp. nov. The author, Elton M.C. Leme, describes a new Brazilian species of Bromeliaceae, Dyckia excelsa Leme, from the State of Mato Grosso, related to D. ferruginea Mez, which grows in the same region. (Novas Bromeliaceas Nativas do Brasil-XI) Pabstia 4(4):6-7 (drawing) May 1993.

We started over twenty years ago with ten tillandsias. We lost nine of them, one by one, trying to grow them inside, in moderate- to low light, with occasional misting. None of them ever bloomed.

As time went on, we got more. And then more; as many as thirty genera. Finally, they were on every shelf, every table, and standing along many of the walls. It became apparent that we needed some kind of place to keep them or we would have to move out ourselves.

I talked it over with my wife Sauny and we decided a "normal" greenhouse just wasn't "us." We've always admired those magnificent, multifaceted iron and glass Victorian conservatories. We have neither the acres of land or acres of money needed to build one of these. So we did what we could.

It would be glass. Rough, full dimension redwood would be the frame and we would build our own windows. It became 17' by 17' and 13' high at the highest point. There had to be resistance to twisting. That reinforcement is usually taken care of by using diagonals. To avoid using them, the main vertical supports became redwood 4 x 4s three feet apart (3' 4" between centers). Four feet above this are 36" redwood 2 x 4s giving window spaces 36" x 48".





Redwood 1 x 6s were split for the outer frames of the windows, and 1 x 2s were used for the muntins and mullions. We made 31 interchangeable windows with nine lights each. Special ones were made to take care of the panels that were not 36" x 48".

We put a thermostat-controlled fan high on the downwind wall. Plexiglass windows were used in the homemade door. The instructions with the cool air inlet louvers said to mount them at floor level. That didn't make sense to me as it would encourage

temperature stratification. So I mounted them up high on the side opposite the exit fan.

The floor is pebbles. Someday we may deck it with redwood. Meanwhile, it is a great place for cryptanthus. One of these days I'm going to put them in the ground.



Figure 15
Front view of the greenhouse showing the homemade door and 6 of the 31 interchangeable windows.

Photographs and drawings by Charles Dills

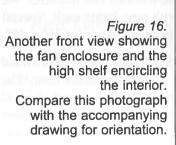




Figure 17.

A side view showing the tall back corner and almost all of one wall, the rocky pool, and part of the deck. The roof panel was not intentionally open, the sheet of glass worked loose and fell into the pool.



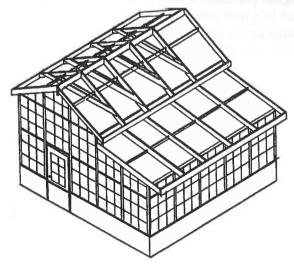


Figure 18.
The author's isometric drawing of the greenhouse.

We were lucky to get 15 glass door replacements, 38" x 78". They are tempered and very strong. They became the roof, supported by 2 x 8 redwood rafters with two 1 x 4 redwood collar beams, each about a third of the way up.

If anyone is wondering, I managed to plan most of this on paper. I took it to the City Planning Department to get a permit. Surprise! It was approved with very little change. Their changes were important and useful.

One of the 36" x 48" window assembles on the windward side is mounted using brass screws in the middle of the top and bottom, allowing the panel to swivel. This construction will add a lot of cool air fast on hot days.

A rough redwood 2 x 12 shelf was bolted on the inside about seven feet up, just above the first tier of windows. It stiffens the whole structure and gives a nice set of display shelves. Sauny found a number of 16" x 47" glass shelves that became available when a downtown store decided to quit. They are mounted with redwood supports and give shelves without shading the area below them.

The main benches are about 28" up from the floor and about 24" deep. They are built of rough redwood 2 x 4s covered with hardware cloth. They are supported from beneath with 2 x 4 supports, angled back and lag-screwed to the 4 x 4 uprights. We will have to brace the hardware cloth since it is sagging a bit.

A large limb from a loquat tree was mounted vertically along one wall. It supports a variety of greenery. Aechmeas mounted in one of the crotches apparently helped rot it and part of it fell off but part is still in place.

A large, low, work-and-display table built of redwood 2 x 4s surrounds the 4 x 4 vertical roof support in the middle of the house. This vertical also supports the overhead watering system.

The lone survivor of our original purchase, a *Tillandsia bergeri*, vegetated for a long time after it was tacked to a post outside and squirted occasionally with the hose. After it was mounted in the greenhouse, it began to thrive and finally rewarded us with its wonderful flowers. I want always to have at least one of these in this house.

A half dozen <sup>3</sup>/<sub>4</sub>" iron pipes are mounted vertically to support those great pot supports I got from the people at Southern Exposure in Beaumont, Texas.

We had an automatic watering system and a misting system below the main benches. We had about three hundred species at the height of the collection, assuming, of course, that they were correctly identified. I regularly sent samples to the Bromeliad Identification Center for identification. I was astounded at the misidentifications I had been sold, some even to genus. And it makes me very suspicious when making new purchases.

Then, a year ago, alas and alack, we had an extended cold snap combined with an unnoticed failure of the automatic watering system. Before we realized what was going on, we lost a good fraction of the collection. And to make matters worse, we lost the identification of many of them.

We have a more realistic attitude now. We collect the ones we like and have added some non-bromeliads such as *Calabanis hookeri*, some flowering vines, and a number of odd caudiciforme plants. Weird! But then, I suppose we are too.

One of the virtues of the height is the presence of a variety of microclimes. There is an area that is hot, sunny, and infrequently watered. This is where we put the desert types. The cryptanthus are on the ground, under a bench where they get no direct sun. If something isn't doing well in one place, we move it until we find a place where it does well. I had an *Abromeitiella*<sup>1</sup> that wasn't doing too well. We moved it until we got it in a bright place with no sun and reasonable moisture. Now it's doing well.

Perhaps I should mention that we don't mourn the loss of a plant. It is too bad, and we don't do it intentionally, but our plants have to learn to live with us, not us with them.

I have deliberately left off most measurements and fine details. A structure such as this should be a creature of the owner's imagination. I have simply provided a guide for one dream. There are others. I want to encourage those of you with a hammer to pound a few nails and make something of yourself. I mean to encourage, and instruct. Of course, should anyone want to write, I will write back and will try to help. But in the last analysis, it should represent you.

It may not be Kew Gardens, but it's all ours.

1371 Avalon Street San Luis Obispo, California 93401

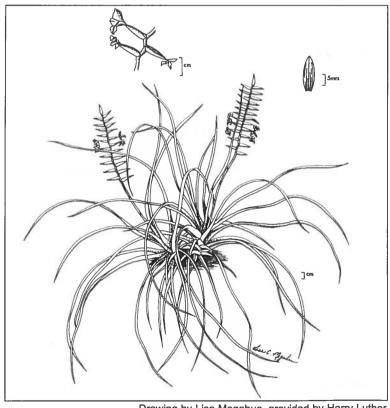
<sup>&</sup>lt;sup>1</sup> Abromeitiella was made synonymous with Deuterocohnia in "A Revision of the Genus Deuterocohnia," M.A. Spencer and L.B. Smith, BRADEA 6(16):141-146; 27 Nov. 1992.

# New Garden Plants: Tillandsia narthecioides

Tillandsia narthecioides, Presl.; Schultes fil., Syst. Veg., vol. vii., p. 1204.

This is a comparatively dwarf species, with the general habit of *Vriesia glaucophylla*, Hook., with small pale inconspicuous flowers, but remarkable for its very curious inflorescence, which is just that of a Lolium or Triticum, the flowers (separate flowers of course here, not spikelets) being adpressed against a distichously flattened rachis. It is a native of Ecuador, and has just been introduced into cultivation by Mr. Bull. We have a single dried specimen in the Kew Herbarium, gathered by the late Dr. Jameson near Guyaquil, where it was originally discovered by Haenke. It belongs to the section Platystachys, kept up by some as a distinct genus.... J.G. Baker

Reprinted from The Gardeners' Chronicle, January 5, 1878. The Latin diagnosis and description in English have been omitted.



Drawing by Lisa Megahue, provided by Harry Luther Tillandsia narthecioides

Ellen Baskerville

A t the May 1993 meeting of the Board of Directors, I was elected chairman of the Cultivar Registration Committee. Before being elected and since, I have visited many bromeliad collections and observed the work of hybridizers. Many of the plants that I have seen have not been registered although I think them worthy of being recognized. I would like to work at improving that situation.

My goal is not only to bring the records up to date and to complete the registration of pending applications, but to encourage new applications by making the process as simple and quick as possible. A glance at the 1991 list of cultivars and grexes will show the many unnamed hybrids. I propose to send selected new registration information with color slides to the editor of the JOURNAL for possible publication. It is my hope that improved registration processes and increased publicity will motivate hybridizers to give their truly unique plants a name. Registration will not only reflect to the credit of the individual hybridizer but inform our members of exceptionally fine products.

The accompanying list of 35 registered cultivars and grexes brings the 1991 list up to date. Work continues on a revised edition of the preliminary list. Your corrections and additions to the current list are very important to the completion of the next edition.

If you would like to have a copy of this 1993 addendum, please send mea self-addressed, stamped number 10 (business) envelope. Members who live outside the United States should send fifty-two cents worth of U.S. postage, if possible. I look forward to hearing from you.

1819 Mid Ocean Circle Sarasota, Florida 34239

#### **CULTIVAR/GREX REGISTRATIONS FOR 1991–1992**

Gei	nus Name C	ult/Grex	Hybridizer	Seed Parent Pollen Parent
AE	Caloosa 02-09-92	GR	Sam Smith	(dichlamydea v. trinitensis x fendleri) X tessmanii
AE	'Hazel Quilhot' 10-15-91	CU	H. Quilhot	Cultivar of A. chantinii with distinct coloration.
AE	Jimmie Knight 02-09-92	GR	Sam Smith	tessmanii X mariae-regina
AE	'Nelwyn' 04-28-92	CU	J. Anderson	Cultivar of A. pedicellata with albino flowers and yellow ovaries
BI	'Ballerina' 04-01-92	CU	D. Beadle	Cultivar of Catherine Wilson X 'Colores'
BI	'Crystal' 04-01-92	CU	D. Beadle	Cultivar of (sanderiana x Catherine Wilson) X 'Poquito Blanco'
BI	'Fandango' 04-01-92	CU	D. Beadle	Cultivar of 'Colores' X amoena v. rubra
BI	'Frolic' 04-01-92	CU	D. Beadle	Cultivar of morelii X 'Poquito Blanco'
BI	'Mamie B.' 04-01-92	CU	D. Beadle	Cultivar of Kline's Red Wine X 'Caliente'
BI	'Margarita' 04-01-92	CU	D. Beadle*	Cultivar of iridifolia? X pyramidalis?
BI	'Muchacho' 04-01-92	CU	D. Beadle	Cultivar of horrida v. tigrina X 'Colores'
BI	'Nita' 04-01-92	CU	D. Beadle	Cultivar of (vittata x vittata) X 'Caliente'
BI	'Primavera' 04-10-92	CU	D. Beadle	Cultivar of Olive Baldwin X Kline's Red Wine
BI	'Ralph Graham French' 05-10-92	CU	K. French	Cultivar of vittata; albomarginated and variegated with clear pink
BI	'Rosita' 04-01-92	CU	D. Beadle	Cultivar of 'Baton Rouge' X amoena v. viridis
NE	'Angel Face' 12-28-91	CU	G. Hendrix C. Johnson*	(olens x 'Fireball') x compacta X 'Bob Read' x carolinae (Cultivar from Hendrix grex #8502)
NE	'Beau Geoff' 12-28-91	CU	C. Johnson*	Cultivar of concentrica from Seidel seed in 1982
NE	'Cameo' 01-02-92	CU	C. Johnson*	Cultivar of concentrica from Seidel seed in 1982
NE	'Cheers' 12-28-91	CU	G. Hendrix C. Johnson*	olens X pauciflora (Cultivar from Hendrix grex #8110)

Gen	ius Name Cu	ılt/Grex	Hybridizer	Seed Parent Pollen Parent
NE	'Domino' 12-28-92	CU	G. Hendrix C. Johnson*	chlorostricta X pauciflora (Cultivar from Hendrix grex #8804)
NE	'Esther Fenton' 01-02-92	CU	C. Johnson*	Cultivar of concentrica from Seidel seed in 1982
NE	'Kismet' 12-28-91	CU	C. Johnson	Cultivar of Pink Polka Dot (F-2)
NE	'Lord Jim' 12-28-91	CU	C. Johnson*	Cultivar of concentrica from Seidel seed in 1982
NE	'Pewter' 01-02-92	CU	C. Johnson*	Cultivar of concentrica from Seidel seed in 1982
NE	'Pot Luck' 12-28-91	CU	C. Johnson*	Cultivar of concentrica from Seidel seed in 1982
NE	'Red Waif' 12-28-91	CU	G. Hendrix C. Johnson*	'Zebrina' X 'Fireball' (Cultivar of Hendrix grex #7902)
NE	'Tar Baby' 12-18-91	CU	G. Hendrix C. Johnson*	(ampullacea x Royal Flush)X pauciflora (Hendrix grex #8103)
NE	'Twinkie' 12-28-91	CU	C. Johnson	Cultivar from carolinae x cyanea
PU	Doris Coleman 02-18-91	GR	A. Flower	alpestris x spathacea
TI	'Wildfire' 02-04-91	CU	John Arden	Cultivar from multicaulis x deppeana
VR	Elvira 02-04-91	GR	John Arden	bleheri x hieroglyphica
VR	'Golden Tips' 02-04-91	CU	John Arden	Cultivar of Maroon Delight with yellow tips on floral bracts
VR	'Inferno' 02-04-91	CU	John Arden	Cultivar of ensiformis x regina
VR	Maroon Delight 02-04-91	GR	John Arden	Maroon Feather X simplex
VR	Slim 02-04-91	GR	John Arden	gigantea 'Nova' X flammea

### NOTES:

The parentheses enclose the formula of one of the parents of the cultivar. That cross is indicated by a lower case x (multiplication sign). The upper case X indicates the major cross between the parents of the cultivar.

The \* indicates the person who named the plant. The person's name without the \* is the hybridizer. (See the 1991 Preliminary Listing inside front cover.)

# A New Miniature Guzmania from Northwestern Ecuador Harry E. Luther

Explorations of the pluvial forests of northwest Ecuador continue to yield novelties including the surprising new guzmania described below.

### Guzmania inexpectata Luther, sp. nov.

A G. nidularioides L.B. Smith & R.W. Read, cui affinis, planta brevicaulis minoreque differt; a G. kraenzliniana Wittmack, cui similis, bracteis primariis omnino foliaceis, sepalis petalisque permajoribus differt.

**Type.** Ecuador. Esmeraldas: Lita-Alto Tambo, 600-700 m, *J. Kent legit.* Flowering in cultivation, 11 Nov. 1992. *J. Kent s.n.* (SEL, holotype).

Plant caulescent, flowering 10–18 cm tall, stems erect and clustering. Leaves very densely imbricate along the stem, spreading, 13–20 cm long, green with reddish striations, brown punctate lepidote throughout especially abaxially. Leaf sheaths elliptic, 5–6 x 2–3 cm, paler than or concolorous with the blades. Leaf blades narrowly triangular, acute, 9–15 mm wide, channeled, soft, very thin



Vern Sawyer for Selby Gardens

Figure 19.

The flowering type collection of Guzmania inexpectata. Note the leaf-like primary bracts subtending the two-flowered branches.

coriaceous. Scape essentially none. Inflorescence bipinnate, 10–20 flowered, the axis densely and coarsely brown lepidote. Primary bracts identical to the leaves except tinged red or rose distally. Branches erect with a 1–2 mm long, flattened, brown lepidote peduncle, suboppositely 2-flowered. Floral bracts very narrowly elliptic or oblong, 13–17 x 2–4 mm, carinate, very thin, inconspicuously punctate lepidote, pale green, translucent. Flowers subsessile, erect, opening during the morning. Sepals elliptic, obtuse, 18–21 mm long, connate 5–6 mm, thin, pale green to white, translucent. Corolla tubular with the apical lobes spreading or recurving. Petals ligulate, acute ca 7 cm long, connate in a slender tube for ca 5–6 cm, white. Stamens and style included.

This new species is closely related to *Guzmania nidularioides* from Choco Province in west-central Colombia. *Guzmania inexpectata* differs by being much smaller in all parts with thinner, much less coriaceous foliage, pale or concolorous leaf sheaths, and red or rose-tinged primary bracts.

Another closely related taxon is G. kraenzliniana var. macrantha L.B. Smith from the Province of Valle in western Colombia. This plant does not appear to be closely related to the much smaller-flowered G. kraenzliana but instead seems to be a more delicate type of G. nidularioides. It differs from G. inexpectata by having larger foliage, dark castaneous leaf sheaths and orange primary bracts similar to G. nidularioides.

All three share spreading—to recurving corolla lobes with *G. wittmackii* (André) André ex Mez and *G. longipetala* (Baker) Mez.

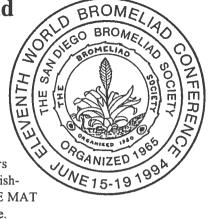
The specific name refers to the sudden, unexpected appearance of the inflorescence.

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

A SEASONAL NOTE: Now that December is here in central Florida and the sun has moved considerably to the south, we are enjoying more light without the danger of having bromeliad leaves burned. Instead, the plants are shining, the lawn is still green even as the cypress turn rusty brown. The orchid trees are blooming, azaleas and camellias are in bud, and bromeliads are pupping. Aechmea weilbachii, gamosepala, x maginalii are blooming (calyculata has already bloomed and faded). Dependable Vriesea x mariae and carinata are in full feather. All of this beauty is in defiance of the inevitable cold (sometimes even to 20° F) snaps. Then will come the late afternoon covering of plants, moving the more tender under cover, and crossing of fingers. We occasionally use the old snow shovel when scraping up acorns and debris...and laugh.—TUL

# San Diego World Bromeliad Conference, 1994 – Bromeliads In Paradise, Update #5 Jack Percival

S an Diego is totally abuzz with the final arrangements for a true and real PARADISE in southern California, all for bromeliad lovers expected to come from all over the world. The finishing touches are falling in place. The WELCOME MAT will be in the lobby of the Hanalei Hotel on 15 June.



### • Expert Seminar Speakers for Your Pleasure and Education

- Elton M.C. Leme, Rio de Janeiro. Expert on Brazilian bromeliads. Principle seminar speaker. "Brazilian Bromeliad Species." "Revision of *Nidularium*."
- Don Beadle, Venice, Florida. Billbergia hybridizer. "Interstate Trafficking in Billbergias."
- Dorothy E. Byer, Vista, California. Award-winning grower of terrestrial bromeliads. "Tantalizing Terrestrials."
- Dennis Cathcart, Bradenton, Florida. Well-known bromeliad grower and collector. "Cargo Report."
- B. Dean Fairchild, Miami, Florida. Bromeliad grower and landscaper. "Bromeliads Will Create Paradise."
- Paul T. Isley III, Gardena, California. Bromeliad grower, author of TILLANDSIA. "Latest Tips For Growing Beautiful Bromeliads."
- Jeffrey Kent, Vista, California. Bromeliad grower. "Rainforest Bromeliads of Ecuador."
- Pamela Koide, Vista, California. Bromeliad grower. "Exploring Virgin Territory in Search of New Species."
- Robert W. Kopfstein, Mission Viejo, California. Professor, Saddleback College. "The Legacy of Ed. Hummel."
- Harry E. Luther, Sarasota, Florida. Director, M.B. Foster Bromeliad Identification Center, Selby Botanical Gardens. "Subgenera of Tillandsia."
- Rolfe W.W. Smith, Kennett Square, Pennsylvania. Horticulturist, Longwood Gardens. "Longwood Gardens and the Cascade Garden of Roberto Burle Marx."
- Bob Whitman, Beaumont, Texas. Founder, Cryptanthus Society. "Cryptanthus:
   Past, Present, and Future."

### • Banquet Luau News

We are mighty pleased to announce that our Big Social Event Banquet Luau Speaker will be Elmer Lorenz, one of the founders and a past president of The Bromeliad Society, Inc. His topic will be, "The Way It Was." This should make for a great evening.

#### • Scheduled Tours of Famous Places, Private Gardens, and Nurseries

Before, during, and after the conference there will be a great array of tours some of which will be a big hit with the children. The imposing list includes:

- "Behind the Scenes" of the San Diego Zoo
- "Behind the Scenes" of Sea World
- San Diego Zoo Wild Animal Park
- Ouail Botanical Garden
- Bird Rock Tropical Nursery, and three private gardens including John Arden's garden. Tour details will follow.

### • Request to Editors and Presidents of Affiliated Societies:

The conference Committee requests that you give this world conference wide publicity at your monthly meetings. Early conference and hotel reservations are urged.

### • Request to All Members: Auction Special Needs

We need your help in obtaining things to auction. We ask you to contribute rare and unusual bromeliads and also materials relating to bromeliads: paintings, books, pottery, statuary. The auction proceeds will benefit directly the M.B. Foster Bromeliad Identification Center.

San Diego, California

#### ARIZONA NEIGHBOR ISSUES INVITATION

Mark A. Dimmitt, horticulturist at the Arizona-Sonoma Desert Museum in Tucson, Arizona, and bromeliad hybridizer, invites you to visit his garden while en route to or from the conference. He asks you to call ahead: 602-883-1380 (day, office) or 602-743-7326 (night, home).

#### **CON EMOZIONE**

Let us play the old song once more: Articles and pictures are earnestly solicited. We have been saying that for more than twenty going on forty years. Many members have responded but we are always interested in letters, articles, and reports of all kinds: What I did and what I learned, casual observations, trip reports, any kind of hobbyist information; conservation work, scientific reports. We are a diverse community and we are serious about our individual interests but we need to keep each other informed. We wouldn't know what to do with a revision of Darwin's Species if he were to rise up and write one but we do very much want to read what you may have to say about bromeliads. There are many periodicals available for great literature, but there is only one Journal for bromeliad people. Modesty will get your nowhere.-Ed.

# **Regional Reflections**

# **Good Root Systems Make Strong Plants**

When a plant is floppy in its medium it usually will be a weak grower even if it gets good light and fertilizer. This is especially true under the less-than-optimum humidity of most indoor setups.

Bromeliads like to be held fast and secure. In the high humidity conditions of most of their natural habitats, epiphytes will wrap such a strong set of roots around the tree branches on which they are growing that they cannot be removed without cutting them off with a sharp machete. This observation is applicable as well even to tillandsias, which have been securely mounted on cork with glue. These plants will grow well and flower when properly secured, but they grow even better and make bigger inflorescences when they put out roots into the bark.

There are many different reasons why a particular plant has difficulty in establishing roots. I have found that aechmeas, billbergias, and cryptanthus usually root regardless of the conditions while some vrieseas and guzmanias tend to be finicky rooters and need special help.

Plants send out roots in search of water, and if the pot medium is too dry this process is inhibited and no roots will develop. When you pot up a pup in a new medium, be sure to thoroughly soak the mix in warm water before potting. Dry peat moss tends to initially reject water and it needs to be soaked before it will absorb and retain the water. Then keep the mix moist by adding water from time to time. The best way to keep a medium evenly damp is to use a wick or a capillary mat.

On the other hand a too wet mix will also inhibit rooting while at the same time making a fertile growing area for the fungus spores that are ever present in the air promoting fungus rot. This condition is usually caused by too dense a mix. The medium must be aerated at all times so it must contain a predominant amount of coarse, friable materials. I prefer to use no more than 30% peat moss and that moss has been strained to retain only the large, fibrous pieces. The rest of my mix consists of parts of giant perlite, shredded tree fern, cork bits, turface (clay pebbles) and occasionally bark chips, styrofoam, and the like.

Such a mix has enough spaces to keep it well oxygenated. At the same time, it enables you to firmly tamp down the medium around the pup so that it is stabilized without needing any crutches. The idea is to avoid movement so that the emerging, small, fragile roots will not break. If the plant does not seem to be

stable after tamping, you can secure the pup by tying a few strips of tape around the base of the pup and onto the outside edges of the pot.

If after 4 or 5 weeks the pup appears to be shaky and offers no resistance when you apply gentle pressure, you should check the base to make sure there are no signs of rot. If you find any soft, brown tissue, cut it out with a razor or sharp knife. Don't be afraid to cut deep—you won't kill the pup. It is important to remove all rotted tissue before repotting. Then spray or dust the base with a fungicide or a rooting hormone containing a fungicide, allow the base to callus for a day and report the pup in a more friable mix. Adding giant perlite to the medium will definitely help.

Since most young pups don't have enough leaves to form a water-holding cup and have not yet produced roots when first potted, I spray them 2 or 3 times a week with a weak fertilizer solution. If you are potting a pup in the winter, it will grow and root more slowly because of the reduced light and shorter days. Rooting will also be retarded if the medium is cold on the window sill. It pays to move the pup into a warmer area or under florescent lights, or wait until spring before removing it from the parent.

Mounted tillandsias will put out roots into the cork bark if given adequate soaking—46 to 60 minutes every 7 to 14 days, preferably sooner if you use high heat in your apartment. In a fine article on roots in the June 1993 Newsletter of the Florida Council of Bromeliad Societies, 1 Carol Johnson made the following interesting suggestions for difficult rooters:

- 1. Perlite is a good rooting medium to promote root production. When the roots have developed, repot in your regular mix but don't shake off the perlite clinging to the roots. (But keeping perlite moist in the drier air of an apartment may require the use of wick, capillary mat, or frequent watering.)
- 2. Contrary to my observations about the difference between winter and warm weather rooting, Carol finds that *Vriesea guttata* will die back rapidly if kept in medium in the summer, but it grows well in a mix in the winter. She keeps *V. guttata* bare root in an empty pot in the summer. This plant has been difficult for us to grow over the years so maybe we should try this method.
- 3. Sit small pups in a soda bottle filled with plain water to a level below the base of the pup. "The stub end of the pup reaches for moisture and in the process forms roots."

Although securing and holding the plant fast seems to be the dominant function of bromeliad roots, a number of studies have shown that the roots are also fully capable of absorbing nutrients as well as water and transporting them to the plant. Thus, many growers put slow release pellets of nutrients and

<sup>&</sup>lt;sup>1</sup> Reprinted in the JOURNAL, November–December 1993, pp. 274–276.

elements such as magnesium in the mix so that they can be absorbed the roots and used by the plant.

There is now available a new product, Nutricote, which comes in many formulas. These pellets are useful to feed all broms, but they are especially valuable for top-watered cryptanthus or neoregelias.

Herb Plever Reprinted from Bromeliana, volume 30, no. 7 November 1993, New York Bromeliad Society, Inc.

Material intended for the information of the N.Y. society members only has been omitted.

## Here's a Hint

If you have a brom that should but doesn't flower don't give up. I have proved there is always hope!

For years I have had a *Tillandsia multicaulis* that has been an erratic flowerer. Friends have brought their plants in each year and shown them off on our competition table but I could never be sure if mine would oblige or not. The first year I had it I got one inflorescence; it then decided enough was enough and produced four pups.

I took them off and potted them and they grew well. I looked forward to having at least two of them flower. Did they? No, indeed. Members brought their plants to the meetings—all sporting from two to four lovely orange-red spikes, but not mine!

By now I was fed up so I took the biggest plant and repotted it. I put it amongst a lot of other broms and told it to see what it could do. It was hosed along with everything else but otherwise I forgot about it. Then one day as I passed by I saw something bright, went over, and there was a *Till. multicaulis* with nine spikes!

Never was a plant moved to a better place in such a short time. So, members, never give up. No doubt your persistence will be rewarded as well worth a try, don't you think?

Bea Hanson Reprinted from Bromeliad Society of New Zealand Bulletin, August 1993

# **Bromeliad Seed Propagation and Growing On**

Having grown orchids in spaghnum moss, young ones particularly, I decided to experiment with bromeliads using this medium. I used the pelletized New Zealand moss and applied the same principles as for orchids. My findings are as follows.

Propagation of seeds is very easy with this method. I simply put the seed on top of the moss, mist with a mixture of fungicide and water, cover the container with a clear lid and let germinate.

Note: the spaghnum moss must be soaked thoroughly before using then squeezed out of excess water and pressed very firmly in the containers. This procedure also goes for growing larger plants in spaghnum moss. If the moss is loose, plants tend to die. At no stage may the moss become dry. With larger plants as with orchids, a very big healthy root system develops. When the seedlings need replanting, I place them, still in moss, in community pots and later still in moss, in one inch pots. When large enough [to be moved] from the one-inch pot, I treat the plants in the normal fashion and plant in normal mix. I do not disturb the plug of moss the plant is in but simply plant it into the pot. I have found plants grow better for me in moss entirely but of course this makes a very expensive growing medium.

I have found this method successful for the genera I have tried. These are Aechmea, Dyckia, Pitcairnia, Vriesea and Tillandsia.

It is interesting to note that plants we usually consider to be grown under dry conditions thrive under this system where the roots are wet at all times. It should also be noted I fertilize the young plants twice a week with the same strength fertilizer I use on all my adult plants.

Des Anderson Reprinted from Bromeliaceae, Sept.—Oct. 1993, Bromeliad Society of Queensland, Inc.

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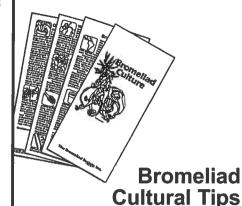
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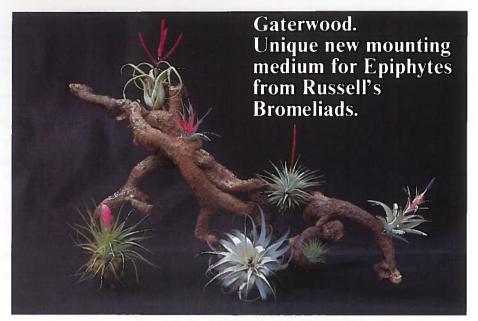
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Thanks to the efforts of people like Alvim Seidel in Brazil and Pedro Glucksmann in Venezuela, who are faithful contributors of seeds, we manage to have a few varieties on the list. There are other contributors who send seeds from time to time, but we need many more. It takes only a few minutes to harvest seeds and clean them for shipment. Some people say, "No one wants the common varieties I have," but what is common to you may be rare or nonexistent to people on the other side of the world.

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#### The activities of the Bromeliad Society consist of

- The publication of the *Journal*, a bimonthly magazine for both amateur and professional, well illustrated in color and black and white.
- The publication of information booklets on bromeliads such as Cultural Handbook, Glossary, and the Handbook for judges and Exhibitors, etc.
- · The fostering of affiliated societies. There are many such groups throughout the world.
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Renate and Klaus Ehlers

Tillandsia quaquaflorifera Matuda was collected in 1976 and not seen again until 1990 when Renate and Klaus Ehlers found it in the state of Guerrero, Mexico, at an altitude of 3,100 meters. Their account of the search for the species was printed in DIE BROMELIE 2/1992. The JOURNAL (March—April 1992) included a shorter version of the report in English. We can now show you a picture of the specimen. The epithet quaquaflorifera means flowering on all sides.

#### Calendar

17-20 March

Florida East Coast Bromeliad Society presents its first show and sale in conjunction with "Everybody's Flower Show, Ocean Center, Daytona Beach, FL. Entries from the public and members of other bromeliad societies are invited. Art Hyland 904-775-9919; 22 Pine Hill Place, Orange City, FL 32763.

25-27 March

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The deadline for articles, ads, calendar, and other notices for the March-April 1994 issue of the JOURNAL is 1 January 1994.