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Cover photographs. Front: A clonotype of *Aechmea cathcartii* flowering at the Marie Selby Botanical Gardens. Photograph by Vern Sawyer. Text on page 249. Back: Catopsis species used in a maize-planting ceremony by the Lenca people of Honduras. Photograph by Sylvia Meluzin. Text begins on page 252.

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Call For Nominations For BSI Directors

Jerry Raack

Nominations are being accepted for the office of Director of the Bromeliad Society International. Five regions have vacancies for the three year term beginning in 1999 and running through the year 2001. The regions are:

California	(1)
Florida	(1)
Louisiana	(1)
Texas	(1)
International	(1)

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 and have been a voting member for the three consecutive years prior to nomination; (2) reside in the region for which he/she has been 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) mail nominations to the chairman of the Nominations Committee between 1 January 1998 and 18 March 1998, inclusive. (Nominations must reach the chairman of the Nominations Committee by 20 March 1998.) 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, the local society affiliation, and a brief biography of the nominee.

Mail nominations to:

Dan Kinnard
Nominations Chairman
32552 Alipaz St. #9d
San Juan Capistrano, CA 92675
(714) 489-0766
E-mail DKINNARD@exo.com

Admontia sp., a Potential Biological Control Agent of *Metamasius callizona* in Florida

Ronald D. Cave[1]

Photographs by the author

The weevil *Metamasius callizona* (Chevrolat) invaded and became established in Florida sometime before 1989, when it was discovered in a commercial nursery (Frank and Thomas 1994a). This pest is causing significant damage to bromeliads grown in private collections and to native wild species in the southern part of the state (Frank and Thomas 1991, 1994a).

Frank and Thomas (1994a) proposed that the optimal tactic for suppressing populations of *M. callizona* would be the discovery of insect parasitoids and their importation into Florida, a method called classical biological control. Many insect parasitoids have the advantage of being specific to the pest, thus not damaging other organisms. Plus, they are self-disseminating, therefore capable of reaching the pest in commercial areas and native habitats. However, no records exist of parasitoids reared from *M. callizona* or related species. For this reason, Frank and Thomas (1994a,b) undertook exploration in Mexico, with no results. In Honduras, I found since 1989 the closely related species *Metamasius quadrilineatus* Champion to inhabit bromeliads in montane cloud forests. Interest was then generated to determine if *M. quadrilineatus* has parasitoids that would parasitize *M. callizona* and thus be considered for importation into Florida as biological control agents.

Metamasius quadrilineatus (Figure 1) is known from Honduras, El Salvador, Guatemala and Mexico (O'Brien and Wibmer 1982). The biology of this insect has not been studied, but is apparently not unlike that of *M. callizona* (Frank and Thomas 1994) or *Metamasius ritchiei* Marshall (Gowdey 1923). The larva burrows into the basal meristem tissue of bromeliads (Figure 2), eventually creating a large cavity. Upon completion of its development, the larva fabricates a pupal chamber from shreds of plant tissue between leaf bases (Figure 3). Within this pupal chamber, the larva pupates. The callow adult emerging from the pupa will remain inside the pupal chamber for a period of time until its integument is completely sclerotized.

In 1993 with support from Dr. Howard Frank of the University of Florida, *M. quadrilineatus* larvae were harvested in the field and placed on an artificial diet in the laboratory. Several of these weevil larvae were parasitized by the larva of a parasitic fly. However, fly larvae that emerged and subsequently pupated failed to emerge from their puparia or failed to expand their wings after emergence, dying immediately thereafter. Many attempts at modifying the rearing

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Figure 1.
Adult *Metamasius quadrilineatus.*

Figure 2.
Larva of *Metamasius quadrilineatus* in meristem of *Tillandsia* sp.

conditions of the fly puparia to improve adult emergence were unsuccessful. Thus, no specimens were acquired with which to obtain a generic or specific identification, nor livestock for laboratory studies on biology and rearing.

Efforts to obtain intact, living flies for biological studies were renewed in 1995 with funding from the Florida Council of Bromeliad Societies. Collections were made at intervals ranging from once a week to every two weeks at one of six cloud forests above 1650 meters elevation. The first collection of bromeliads was on January 24. Plants were taken principally from the forest floor but occasionally from trees; the majority of the plants came from the forest floor because these were more abundant and more accessible.

Bromeliads were placed in cloth bags and transported to the laboratory. Each plant was dissected until a *M. quadrilineatus* larva and/or pupa was detected. The base of the plant was then wrapped in a water-saturated paper towel. The entire plant was then placed inside a cage and sprayed daily with water. Examinations of the cages for emerged adult parasitic flies were made once to three times daily.

Four species of bromeliads yielding weevils were collected in 1995: *Catopsis hahnii* Baker, *Vriesea nephrolepis* L.B. Smith & Pittendrigh, *Tillandsia orogenes* Standley & Williams and *Tillandsia standleyi* L.B. Smith. Further collections in 1996 detected the following additional host plants for *M. quadrilineatus: Tillandsia yunckeri* L.B. Smith, *Racinaea spiculosa* Grisebach, *Tillandsia ponderosa* L.B. Smith, *Tillandsia guatemalensis* L.B. Smith and *Catopsis morreniana* Mez. Bromeliad species were identified by Antonio Molina, botanist at the Paul C. Standley Herbarium of the Escuela Agricola Panamericana.

In total, 424 larvae and 60 pupae were collected from 6,920 bromeliads between January 1995 and July 1996. Infested plants contained from 1 to 3 larvae and/or pupae.

The first live, intact adult fly with expanded wings emerged in February 1995. However, only three more flies emerged over the next six months. Close examination of the adult flies confirmed that this parasitic fly attacking *M. quadrilineatus* larvae is a member of the family Tachinidae. The larvae of all species in this family are parasitic in insect larvae, pupae and adults. Verification that the flies from *M. quadrilineatus* parasitized the weevil larva was done by dissecting host pupal chambers and finding tachinid puparia and host cadavers inside. Preserved flies were sent to the Taxonomic Services Unit of the Systematic Entomology Laboratory, ARS, and USDA, in Beltsville, Maryland. Norman Woodley, a tachinid fly specialist, provided a generic determination of *Admontia* (Figure 4). Monty Wood, a tachinid fly specialist in Canada, later gave confirmation. It is highly likely that this *Admontia* species is new to science due to its apparent isolated distribution in a region, which has been historically poorly collected. However, ten species in the genus are known from North America,

where they are reported as parasitizing the larvae of crane flies (Tipulidae) (Sabrosky and Arnaud 1965, Cole 1965).

From September 1995 to February 1996, 60 flies emerged from field-collected bromeliads, 57 of these from Tillandsia spp. During this period, percent parasitism as a proportion of number of weevil larvae + pupae per collection varied from 5–67%. Emergence of adult flies from field-collected bromeliads placed in cages was usually about one month after collecting the infested bromeliads in the field. Fly emergence from bromeliads was more frequent in the afternoon hours than the morning hours. In the laboratory, adult flies fed on a 10% honey/90% water mixture and lived for up to three weeks.

Since the weevil larvae are borers within the bromeliad meristem, the female fly probably cannot oviposit on them directly. I hypothesize that the female larviposits near the tunnel made by the weevil larva, where the *Admontia* larva enters the cavity in the meristem to find its host. A parasitized weevil larva will form a pupal chamber, but is killed by the parasitoid before pupating. The *Admontia* larva may pupate within or outside the host pupal chamber.

Results from this initial exploratory project are: 1) the taxonomic identification of the parasitic fly; 2) development of a rearing method for obtaining live adult flies for establishment of a laboratory culture and biological studies; 3) identification of cloud forests in which populations of *Admontia* sp. exist; 4) general information on seasonal abundance, level of parasitism in the field, adult food, longevity, searching behavior and host stage killed. The project is continuing from 1996 to 1997 with funding from the Florida Council of Bromeliad Societies. The objectives of this continuation are 1) to measure more accurately parasitism rates in the field to estimate the potential impact of the parasitoid, 2) to develop a method for mass rearing of *Admontia* sp. in the laboratory and 3) to study the developmental and reproductive biology of the fly. The ultimate objective is to have a biological control agent for introduction into south Florida, which will eventually suppress populations of *M. callizona* to insignificant levels.

ACKNOWLEDGMENTS

I am grateful to Nahúm Sauceda for the drawing of *Admontia sp.*, to Howard Frank and Al Muzzell for their reviews of the manuscript,and to the Florida Council of Bromeliad Societies Inc. for providing funds for field and laboratory work.

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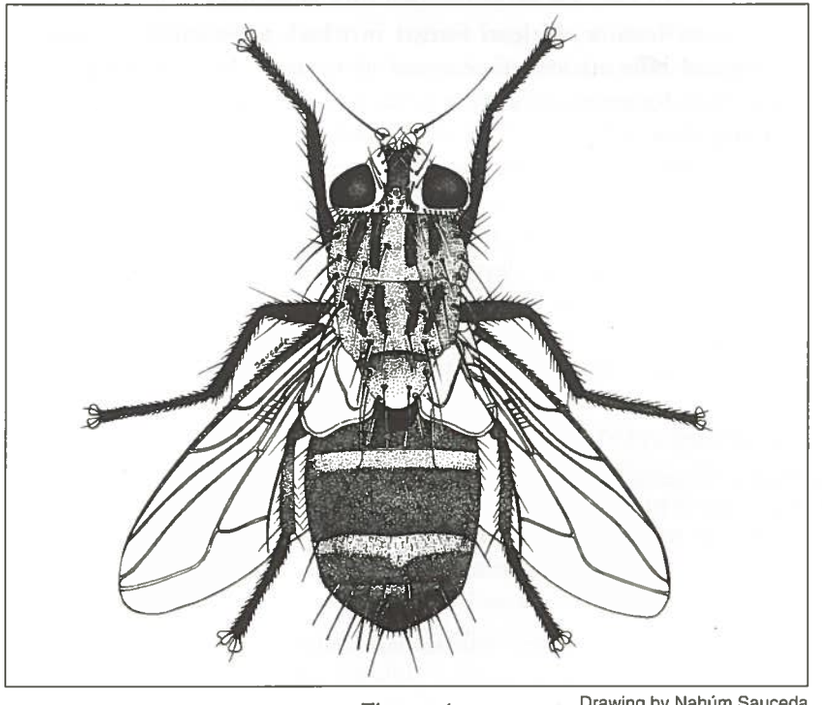
Figure 3.
Pupal chamber of *Metamasius quadrilineatus*.



Drawing by Nahúm Sauceda

Figure 4.
Habitus drawing of *Admontia* sp.

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El Zamorano, Honduras

Contributions to the Society

The people and organizations below deserve the thanks of all BSI members. We would like to acknowledge their gifts and express our gratitude to them and the many others who have contributed to the society over the years beyond simply paying dues. Some have contributed additional funds to the JOURNAL color fund, some have contributed to the Mulford B. Foster Bromeliad Identification Center, some have donated memberships to friends or educational organizations, and some have made a donation to the BSI to use as it sees fit.

Organizational donations

Sarasota Bromeliad Society (in memory of Lyman B. Smith)
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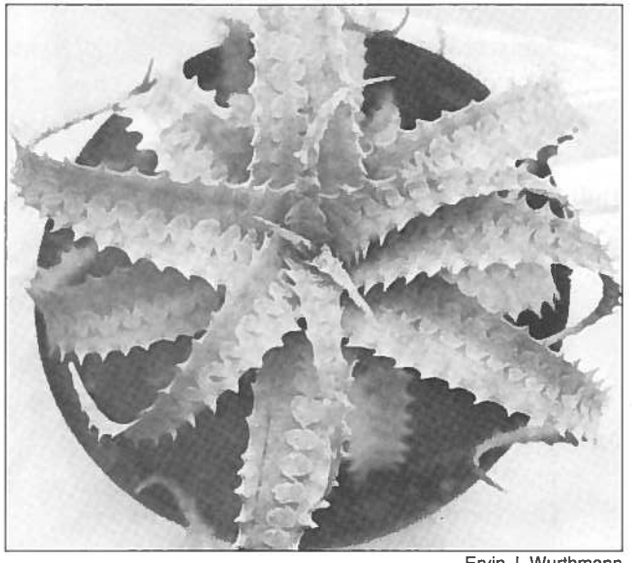
PLANT IN FOCUS: *Cryptanthus warasii*

Dorothy Byer

Cryptanthus warasii Pereira is a semi-succulent xerophytic bromeliad that greatly appeals to both succulent and bromeliad collectors. On August 25,1977, Eddie Waras discovered *C. warasii* at Diamantina, Minas Gerais, Brazil. The holotype is maintained at the Herbarium Bradeanum in Rio de Janeiro. All Cryptanthus species known to date are found only in Brazil.

Members of the genus are often called "earth Stars". Most are mesophytes inhabiting grasslands and forests, but *C. warasii* differs by growing in the open, colonizing humus-deficient cracks in cliffs. The 20 to 30 leaves which make up its small rosette are linear-triangular, from 2 to 6 cm long, 1 to 2 cm wide, and so densely covered with white scales that they appear to be felted. They are broadly concave on top and keeled on the underside, acting like a backbone to give rigidity. The marginal spines, approximately 2 mm long, are almost straight. The original description states that the spines curve toward the leaf-base, but in my experience this is true only of the basal portion of the leaf. From the middle of the leaf, the spines begin to hook towards the apex. The scaly coating on the leaves has distinct and beautiful spine impressions on both the top and the bottom that look a bit like zippers.

The inflorescence is nestled in the center of the rosette. It consists of about 20 flowers arranged in fascicles of 2 or 3. Spineless floral bracts about 11 mm long, glabrous above scaly below, equal the length of the sepals. The petals are white to off-white, slightly longer than the sepals, and recurve at anthesis. Stamens are exserted at anthesis.



Ervin J. Wurthmann

Figure 5.
Cryptanthus warasii

Before flowering, the rosette is upright and flaring. The leaves gradually recurve until,

after flowering, the plant flattens out and produces a few pups on stolons. As with other terminal-flowering bromeliads, the parent plant dies and the offspring begin a new cycle.

When not in flower, it could be difficult to guess that *C. warasii* is indeed a *Cryptanthus* and belongs to the subfamily Bromelioideae instead of the Pitcairnioideae, as do the puyas, dyckias, hechtias and most other terrestrial xerophytic bromeliads. Since this species is rarely seen in collections, there is little chance to become familiar with it except by studying plants in a conservatory or botanical garden. This bromeliad has an undeserved reputation for being difficult to grow. It apparently does not do well if kept in 6-inch pots of humusy soil in the humid, warm greenhouse conditions so favored by mesophytic cryptanthus species. Instead, *C. warasii* thrives with warm sunny days, cool nights, and plenty of air circulation, in a 4 or 5 inch pot filled with cactus-type soil mixed with about 50 percent pumice or perlite. Frequent spring and summer fertilization with a dilute solution of a balanced fertilizer produces a plant that does credit to the grower.

This charming plant presents two challenges. The first challenge is to find one; the second is to grow it successfully.

San Diego, California

Reprinted in part from the BROMELIAD BLADE, *June 1997, the newsletter of the San Diego Bromeliad Society. It originally appeared in Cactus and Succulent Journal, November-December 1996, Vol. 68(6).*

Area Code Changes

Membership Chairman Carolyn Schoenau has asked to remind those members whose telephone area codes are being changed to notify her of the changes so that the next roster will be as accurate as possible. When notifying customers of area code changes, some telephone companies send out an information sheet listing all prefixes that will be moved to the new area code. Rather than throw away that information sheet, Carolyn would appreciate it if you mailed it to her instead so that it can be used to update her files for others in the new area code that did not send in the change.

ERRATA:

In volume 47 number 4, (July-August 1997), the plants in the photographs on page 174 were identified as *Vriesea namuzae.* The correct name is *V. nanuzae.*

Ritual Use of Bromeliads in the Maize–Planting Ceremony of the Lenca of Honduras: Part I

Sylvia Meluzin[1] **Photographs by the Author**

Among the Indians of both ancient and present-day Mesoamerica[2], maize was, and continues to be, the predominant food in their diet. Maize was indeed a potent item in the ancient religions. Being an archeologist by profession, I had not encountered in the archeological and ethnological reports any reference to a pre-Columbian religious significance of bromeliads. However, continuing research, especially in the botanical literature, has provided some tantalizing leads (e.g., Bennett 1990, von Bismark 1990). Today throughout Mesoamerica within a supposedly Christian context, both in Ladino urban settings and in more rural Indian areas, bromeliads can be seen as church and home decorations during various holidays (Berlin et al. 1974, Blackburn 1982, Breedlove and Laughlin 1993, Guess and Guess 1996, Shook 1996). This is presumably because of the beauty of their brightly colored inflorescences and their little or no maintenance. I was therefore quite intrigued by the ethnographic fieldwork of Anne Chapman (1985, 1986) among the Lenca of Honduras which revealed a ritual use for epiphytic bromeliads in various Indian ceremonies or *composturas,* especially in regard to maize-planting. She concluded the bromeliad (or *zomo* in the Lenca language) was either a symbol of the spirits to whom the ritual is dedicated (i.e., sky and earth spirits) or else a vehicle that transfers the offerings to the spirits. As a grower of bromeliads for their aesthetic qualities I noted that her bromeliad descriptions were either unclear, lacked diagnostic data, or were incorrect. In addition, unfortunately the published photographs of the ritual *zomos* appeared indistinct. Thus, even though Chapman's presentation on Lenca religious beliefs is overall extremely detailed and very informative, I believed there was more to be understood regarding the *zomos.*

The bulk of Chapman's fieldwork took place in 1965. In the following years, mainly through pressure from the Honduran government and the evangelical Catholic movement *La Palabra del Dios* (The Word of God), the *composturas* ceased to be performed. Then apparently there occurred a revival. I decided to further document the maize-planting *compostura* by hopefully witnessing its performance, or at least photographing some actual ritual *zomos,* and then collecting these same types of plants. To that end, I made two fieldtrips to Honduras in 1990 and 1996.

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[2] Mesoamerica is the culture area defined by the various ancient pre-Columbian civilizations that existed in approximately the southern half of Mexico, throughout Guatemala and Belize, and down into El Salvador and western Honduras.

THE SETTING: FIRST DATA AND HYPOTHESIS

Lenca country is located in western Honduras and parts of El Salvador. It is a mountainous region, much of it covered in pine-oak forest at about 5,000 to 7,500 feet in elevation. However, as a viable purely Indian tradition, Lenca culture is waning. Maize is planted at the beginning of the rainy season, which can fall from around the end of April to early May. Because of the recent pressures upon the people to abandon the *composturas,* I expected that there would probably be reluctance on the part of most to take me into their confidence.

Chapman kindly supplied me with the name of one of her informants, a school teacher named Berta Mendez de Reyes, who lived in La Esperanza-Intibucá, and with whom in 1990 we (my liaison from the Honduran Institute of Anthropology and History and I) were to confer over the course of three days. That first day she presented me with a magnificent array of large green-leafed tillandsias, all in bloom, such as *T. multicaulis, T. lampropoda,* and *T. yunckeri.* The next day she led us to the hamlet of Azacualpa and beyond where there were impressive canopies of the green-leafed tillandsias. Berta and I were both very enthusiastic over the beauty of the *zomos.* But when I tried to correlate the various plants and Berta's comments with Chapman's descriptions and photographs, I noted variations and/or inconsistencies and a possible reluctance by Berta to reveal details of the ritual, at least in regard to the *zomos.* It would appear—or so it seemed at the time—that just about any of these *zomos* could be used in *composturas,* if only for adornment. On the last day, however, just as I was getting into our vehicle to leave, Berta presented me with some *Catopsis* and said *these* were the ritual *zomos.* There were nine(a Lenca sacred number) *Catopsis berteroniana,* and none were in bloom. She referred to this *zomo* as *jarrito* (little jar) and as used only for the maize-planting *compostura.*

Catopsis then formed the basis of my hypothesis, which is that these particular bromeliads are ritually significant because of their resemblance to the Indians' most important food plant which is maize. The elongated rosette of the soft *Catopsis* leaves, its apple-green color, lightened by a white-cretaceous coating, resemble the leafy sheath covering an ear of corn. The inflorescence with clusters of small white or yellow flower petals reminds one of the corn tassel, while the shape (and in some instances the color) of the floral bracts calls to mind the kernels of corn themselves.

TESTING THE HYPOTHESIS: THE *REZADOR,* LAST YEAR'S ALTAR, AND THIS YEAR'S *ZOMOS*

During the first fieldtrip, I arrived towards the end of April. Berta at that time told me that May 3, Santa Cruz in the Catholic calendar, was the usual day for the maize-planting rituals. (I was to be in another part of Honduras that day and so was unable to pursue this lead.) This did give me a specific window in time for my second fieldtrip to test my hypothesis. In 1996, May 3 fell on a

Figure 6.
A selection of the blooming *zomos* collected from the region around La Esperanza-Intibucá.

Figure 7.
At Yamaranguila a basket of *zomos* gathered for a maize-planting ceremony. Of the two in bloom, the one in front was called an Apostle *zomo,* while the one behind it was labeled an angel *zomo.*

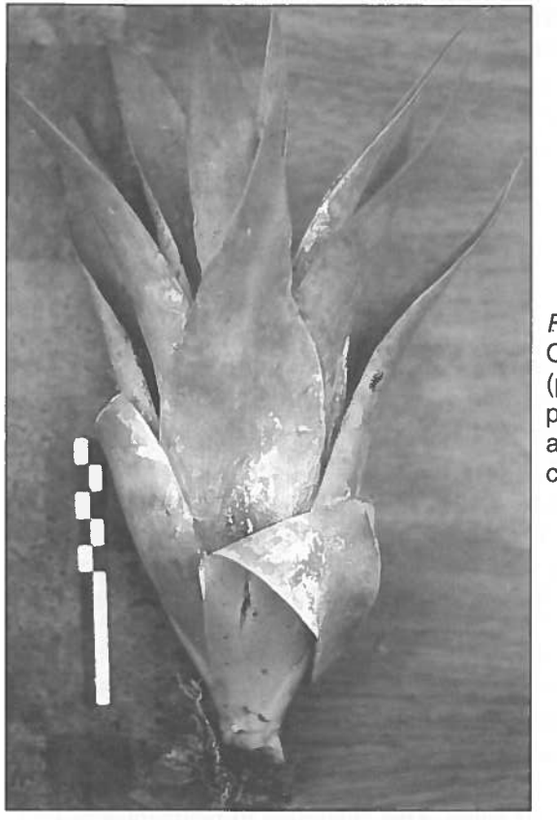

Figure 8.
One of the nine *zomos* (probably *Catopsis berteroniana*) presented by a *rezador* as appropriate for a maize- planting ceremony. (Near Chiligatoro.)

Figure 9.
Ritual debris from last year's altar. Evident are two of the four *Catopsis* noted, in addition to one of the two crosses used. (Near Chiligatoro.)

Friday; but I suspected that there might be some leeway and that the weekend would prove more convenient for some. In 1990, Berta had taken us to José Mercedes Dominguez, another one of Chapman's informants who was a *rezador* (one who recites prayers at the *composturas*). On the second fieldtrip my government liaison and I again made contact with him at his home in Quebrada de Lajas. He immediately declared that the rituals were not being performed anymore. I was skeptical. After a long discussion, he suggested that, *if* we really were interested, he could take us to where he would gather the plants he would use *if* there were to be a ritual.

The next day we drove with him along recent, deeply rutted, dirt roads which revealed cleared lots for sale. We stopped in a meadow to wait for him to cover the last half-mile. There was nothing secretive about the location of the plants, but he did say it was rough and slippery terrain. Having a weak knee, I did not want to risk a mishap after coming this far and apparently gaining his confidence. When he returned, he presented me with what was probably *Catopsis berteroniana* —nine of them. I was elated. He explained the reason for using the plants from the trees was to honor the saints who admire these plants because they do not grow in the ground. He said they are not in bloom when used in the ritual.

As we drove him back to his house, he mentioned there was to be a maize *compostura* on May 15. He also said in passing that the water (the exact source or location was unclear) was bad and needed to be purified, specifically, the water must be paid. He meant that the appropriate *compostura* should be performed with, incidentally, this same type of *zomo.* This reference to payment was more akin to an explanation of the maize *compostura* that I was told in 1990, namely, that there was the need of Adam to till the soil but not to have it scream. As explained by Chapman (1985:98), the Lenca consider the earth as a mother, Santa Tierra, who maintains the people. However, she is offended by the intrusions made in her by farming implements. Thus, without some sort of payment through the *compostura,* she would not allow any harvest. Another of Chapman's informants elaborated that the stewards of the land—those who live in the earth—are considered the twelve apostles of Santa Tierra. (The marvelous combinations of Christian and pre-Columbian imagery display a vibrant syncretism.)

It was providential that we did not go with the *rezador* to gather the plants, because, as we were waiting next to a cleared cornfield, we met a boy who pointed out the location of last year's *compostura.* In this case, the ritual had not been in the field itself but near an adjacent cluster of trees. Because epiphytic bromeliads can fall from the trees, yet still be viable on the ground, I knew that it was possible to walk past the remains of last year's altar without realizing it—unless one knew the telltale signs. I would like to have sifted through the ritual debris, but I did not want to risk offending the boy's family who was working a short distance away. The altar had been constructed of pine branches; the pine

needles were now dry and brown. One of the two crosses used was still in place. Amidst the leaves were poultry feathers from the birds used for sacrifice and for the meal. And, still appearing viable with their characteristic apple-green color, were at least four *Catopsis* (quite possibly *C. berteroniana*) poking out from the leafy debris.

Back in La Esperanza-Intibucá we unexpectedly encountered a member of the Instituto who referred us to the town of Yamaranguila, where she had been working with the natives to set up a cottage-industry production of pottery. The next day we went to meet with José Gavino Manueles, the head of the *Alcaldía Auxiliaría de la Vara Alta de los Indígenas Lencas del Municipio de Yamaranguila* (the *cofradía* or local Catholic laymens' association in Yamaranguila). After explaining my interest in *zomos* and the maize *compostura,* we were surprised and delighted by being extended an invitation to attend a *compostura* that would be held two days hence on Saturday, May 4. After our discussion I made my contribution ostensibly to buy the turkey for the ritual, but more likely to help defray costs in general.

Before we left, we were shown a basket full of *zomos,* already picked for the *compostura.* It was a large collection, seemingly more than enough for just one ritual. I was allowed to examine and photograph the different types I could detect. A few were in bloom. A specimen of *Catopsis hahnii* was named one of the twelve Apostle *zomos.* An apparent *Catopsis subulata* was called one of the nine angel *zomos.* Again the number nine, except that the name "Apostle" changed the accompanying number to twelve. (These numerical designations apparently do not include any offshoots.) In addition, the *Catopsis hahnii* was labeled as a highland *zomo,* while *C. subulata* was a lowland *zomo.* Because all the area is essentially mountainous, these differences presumably refer to the specific locales in the surrounding area.

[To be continued]

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Figure 10.
From the basket of ritual *zomos* at Yamaranguila, an example of an Apostle *zomo, Catopsis hahnii.*

Figure 11.
Inflorescence of the same plant

Figure 12.
From the basket of ritual *zomos* at Yamaranguila, an example of an angel *zomo, Catopsis subulata.*

Figure 13.
Inflorescence of *Catopsis subulata.*

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Hints on mounting tillandsias on cork

You will find cork bark is much easier to work with when it is wet because it is softer. Soak the cork in a plastic container of water the day before you plan to use it and you will find it much easier to break, to attach plants and to add a hanger. The cork will look softer and more natural if broken rather than cut. Score the cork on the back to make it easier to break.

Kudos to Caloosahatchee, Sarasota and the Cathcarts

The standard policy of the JOURNAL is to acknowledge all gifts to the Bromeliad Society International, the JOURNAL Color Fund, and the Mulford B. Foster Bromeliad Identification Center, regardless of the size of the donations made and without listing the amounts donated. However, several recent donations were so generous that they deserve special mention.

The Caloosahatchee Bromeliad Society not only unanimously approved a resolution to donate $1,000 to the Bromeliad Society International, but to also launch a drive to attain 100% BSI membership within its own ranks. In so doing, the Caloosahatchee group, one of the largest affiliates of the BSI, has taken a leadership role in reversing the declining membership in the BSI and sets a standard that other affiliates should consider matching.

The Sarasota Bromeliad Society recently donated $500 to the color fund in memory of Dr. Lyman B. Smith.

In the most recent issue of their interesting and informative newsletter, the CARGO REPORT, Dennis and Linda Cathcart have offered a ten dollar discount on plant orders to their customers who join the BSI when placing an order. Their generous offer has resulted in 43 new members joining the BSI in the short time since that issue of the CARGO REPORT has been released, with perhaps more to come.

All of this is especially good news to an organization facing cutbacks on services due to a declining membership. The organizations and individuals involved deserve the thanks of anyone interested in bromeliads everywhere.

Tall Stories

Chester Skotak **Photographs by Peter Bak**

John M. Hall, artist, naturalist and my good friend for the last twenty years, related the following story to me.

Many years ago, he was traveling the backwaters of the Amazon River in Peru for several weeks in search of bromeliads, orchids and ornamental plants. This was the time when traveling was much harder and communications on the Amazon almost nil. Upon coming to a small town, he found a way to call by radio to a telephone hookup in Lima to call Florida and make arrangements to return home. After three days, many calls, and much effort calling different friends he finally got through to his grandmother. The operator said "long distance from Peru" to which she replied, "It certainly is" and promptly hung up.

Dennis Cathcart and I made a trip to Panama several years ago. Aside from all of his other attributes, Dennis is an excellent photographer, as those who have seen his photos over the years can attest. I can personally state that Dennis takes photos of everything. After ten days of traveling in Panama, we were on our way to Fortuna through the city of David when we passed a man pulling a dead dog on a chain. Now you have to understand this dog had its feet straight up in the air, so it was quite a sight. We were even more astounded further down the road when Dennis realized he had not taken a photo.

On a recent trip to Ecuador with Peter Bak and Herb Hill, we drove hard and covered 2200 KM in one week's time. All three of us were jammed into a jeep along with equipment, plants and three different personalities. Things happen on the road, and though not necessarily dangerous, they are always unexpected. On this trip, Herb was having trouble with his camera and decided to fix it. Needless to say, that camera is now a permanent part of the Amazon landscape and Herb has since bought himself a new one. My camera had bugs in it - real bugs - but I won't go into detail about this, as it sounds too far-fetched. That left Peter Bak to take all the photos and I am sending some of them along as proof that we were looking at bromeliads at least part of the time and not spending all our time working on cameras.

The origin of each and every bromeliad species has a story behind it. Somebody, at some point in time, brought them into cultivation. Some were found on walking expeditions involving great effort, others on river excursions, or maybe on just a motor tour. Many came from great distances and you might be surprised to know, many have even come a "long distance from Peru".

San Isidro, Costa Rica

Figure 14.
Guzmania danielii on the road from Tulcan to Maldanado, Ecuador.

Figure 15.
Guzmania cf. *weberbaueri* west of Mera, Ecuador.

Figure 16.
Guzmania cf. *mosquerae* near Baeza, Ecuador.

Figure 17.
The author holding a flowering *Guzmania conifera* east of Yantzaza, Ecuador.

Introducing: *Aechmea cathcartii*

Harry E. Luther

Although *Aechmea cathcartii* (cover photo) was first described in this journal (Reed & Read, 1981), it apparently has not been widely grown by hobbyists. Perhaps it needs a "reintroduction" to the readers of these pages.

The type of *A. cathcartii* C.F.Reed & R.W.Read was collected in 1976 from northern Venezuela where it grew as an epiphyte in the rainforests of Parque Nacional Guatopo. When described it was known from only a single collection, but now several additional specimens have been identified in herbaria, all originally misdetermined as *A. nudicaulis,*[1] in spite of the fact that the authors of *A. cathcartii* compared their new species to *A. victoriana* in subgenus *Lamprococcus.*

Flowering specimens of *A. cathcartii* are 35—60 cm in diameter and 30—50 cm tall. This species requires warm, moist and shaded conditions. I suspect one factor accounting for its scarcity in horticulture is its intolerance of even short periods of freezing temperatures (O°C.). Also, the inflorescence is not especially long-lived; it lasts in good color for two to three weeks.

Aechmea cathcartii was poorly illustrated when described. The cover photo and drawing (figure 18) presented here will, hopefully, alleviate any questions concerning the nature and identification of this species.

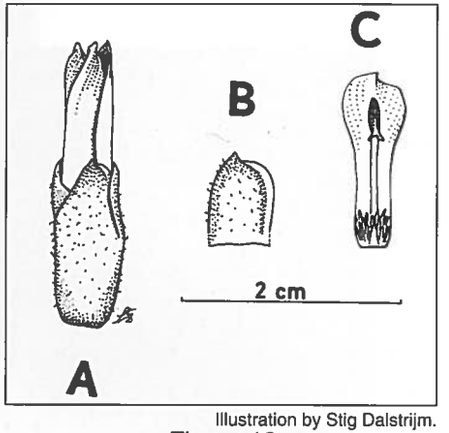

Illustration by Stig Dalstrijm.

Figure 18
Aechmea cathcartii, drawn from the clonotype. A, flower; B, sepal; C, petal and stamen

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

[1] '*Aechmea nudicaulis* is a polymorphic and widespread species and is the type of subgenus *Pothuava.* It does appear to have an affinity with *A. cathcartii* as do some members of the genus *Ronnbergia.* The ronnbergias, with their inflorescenses of muted colors and with spreading corollas, are probably adapted to insect pollinators. In contrast, hummingbirds probably find the "hot-colored" inflorescences and tubular corollas of the aechmeas more to their liking. Perhaps the differences between *Ronnbergia* and *Aechmea* are due more to recent adaptations to different sorts of pollen vectors than to phylogeny (descent)

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Covers (unnumbered pages) are listed as if numbered. Page numbers in *italics* refer to black and white illustrations, those in **bold face** refer to color photographs. New species or those with status changes are shown in both *italics* and **bold face.**

The Genus *Greigia* in Costa Rica and Panama

Jason R. Grant **Photographs by the author**

The genus *Greigia* is represented in Costa Rica and Panama by two species, *G. columbiana* L.B. Smith and *G. sylvicola* Standley. They are relatively large terrestrial sympatric species that occur in high-elevation cloud forests near the lower edge of the paramo of the Cordillera de Talamanca. These species are rarely collected or observed, likely due to a hidden inflorescence. All other bromeliads of this size in other genera in Mesoamerica have large erect-to-paniculate inflorescences. Non-specialist collectors may easily overlook these plants anticipating that a large inflorescence will appear at a later time.

Greigia columbiana is a caulescent herb that creeps along the ground (for more than 2 meters) before curving upward to a full extent of 1.5—2.0 m. It's a stately appearing dracaena-like plant that appears sterile from a distance. The inflorescences occur deep within the leaf axils, barely extending beyond the leaf sheaths. It can be differentiated from *G. sylvicola* by its larger size, usual occurrence as a single specimen, pink petals, and wide leaf blades (30-45 mm wide at the middle of the mature leaves on flowering plants) that are so densely lepidote beneath so as to give a sharp color contrast to the upper side. *Greigia columbiana* ranges from Costa Rica to Colombia. Representative specimens examined include: Costa Pica. San Jose: Canton Dota, km marker 65 Carretera Interamericana, near Cerro la Muerte, 30 May 1995, *Grant 95-02355 & Rundell* (US,CR,MARY,SEL). Panama. Bocas del Toro: Cordillera de Talamanca headwaters of the Rio Culabre, 6 airline km NW of the peak cf Cerro Echandi on the Costa Rica-Panamanian international border, *Davidsae et al 25245* (CR,MO). Colombia. Paramo de Romeral, Norte de Santander, Killip & Smith 18689 (holotype GH; isotype US).

Greigia sylvicola is a short-caulescent (to 1 m) herb that grows 1—1.5 m tall. It can be differentiated from *G. columbiana* in its smaller size and white petals. The plants often aggregate in groups, have more slender leaf blades, 14—20(28) mm wide at the middle of mature leaves on flowering plants that are nearly glabrous both above and below without much of a color difference. *Greigia sylvicola* ranges from Costa Rica to Panama. Representative specimens examined include: Costa Rica. San Jose: Canton Dota, near Laguna de La Escuadra, northeast of El Copey, 16 Dec 1925, *Standley 41975* (holotype US); San Jose: Canton Dota, km marker 67.5 Carretera Interamericana, near Cerro la Muerte, 1 Jan 1994, *Grant 94-02299 & Rundell* (US,CR,F,MO,SEL). Panama. Chiriqui: 1 km south of the entrance to Parque Nacional La Amistad near Cerro Punta, 15 March 1996, *Grant 96-02428 & Rundell* (US).

Department of Plant Biology
University of Maryland

Figure 19.
Habit of *Greigia columbiana* at Cerro la Muerte, Costa Rica.

Figure 20.
Cross-section of *Greigia columbiana* showing the short inflorescence.

Figure 21.
Flowers of *Greigia columbiana.*

Figure 22.
Habit of *Greigia sylvicola* at Cerro la Muerte, Costa Rica.

BROMELIAD ROUNDUP

Odean Head

"Bromeliad Roundup" is the theme for the next World Bromeliad Conference to be held in Houston, Texas on July 1-5, 1998. These conferences are sanctioned by the Bromeliad Society International and provide the best means for international participation. My wife, Betty, and I attended the 1977 conference in New Orleans and enjoyed ourselves so much that we have not missed a conference since. There are usually 15-20 countries represented and I am happy to say that I have met and made friends with people from many of them. I see most of these friends at every conference and it provides the perfect opportunity to reminisce and talk bromeliads.

I will briefly describe some of the main activities of the conference for the benefit of those who have not attended in the past. You must realize that the people and/or plant factor associated with each activity is the principal attraction. There will be two days of simultaneous seminars including a worldwide show and tell. The WBC is moved around as much as possible so that those in attendance can see how bromeliads are grown in different parts of the country. Even those who live far from the conference location can still show how their plants are grown by bringing slides to the worldwide show and tell. You will have the opportunity to talk about them or, if you prefer, we will have someone that can show them for you. This is another great way that we can share internationally so don't forget your slides.

There will be meetings galore presenting more opportunities for sharing. Both the BSI and the Cryptanthus society will hold board meetings. The newsletter editors will meet together as will the judges. There will be another informative cyber coffee. Since the first one in Orlando, many more bromophiles have connected to the Internet and many more bromeliad sites are available. The benefits derived from this meeting alone could make the conference worthwhile for web browsers.

You are encouraged to bring plants and enter them. Let's make this the best show ever. Plants will be available for sale from the top commercial vendors as well as plants from local members. There will also be plenty of room for society and commercial displays — always a welcome addition to the conference.

Don't forget the great banquet and the two fantastic rare plant auctions. There will be garden tours, with buses provided, to visit some of the nearby plant collections. Many post conference garden tours will also be available. Plan to stay over for a few days to see these and other local attractions.

Houston, Texas

Bromeliads in the Shadow of Ancient Ruins at Samaipata, Bolivia

Dick Endt

During travels in South America, it is often the unexpected delays which bring about the greatest surprises...moments totally irrelevant to the purpose of a trip. One such example occurred in August 1995 in the Serrania Los Volcanes in Bolivia during a planned visit to the ancient ruins of a pre-Inca stronghold on the summit of Samaipata Mountain. This mountain forms part of a series of steep sandstone cliffs on top of which an ancient fort was situated.

We arrived by air to Santa Cruz, Bolivia. This large sprawling city is the center of commercial activity in the eastern province of Santa Cruz, a part of Bolivia, which borders the Brazilian State of Mato Grosso. The town of Santa Cruz developed during this century and grew with the exploitation of the hinterlands for timber, minerals and livestock grazing. East of the city of Santa Cruz are the extensive plains known as the northern Chaco region. It is often very hot, yet at times near freezing temperatures can occur. Most of the natural vegetation has disappeared and been replaced by large cattle farms, sugar cane fields, and vast areas of dry scrub. To the west of the city the land gradually rises to become foothills to the Andes Mountains, and is mostly covered by deciduous forest. Rainfall increases as altitude increases and vegetation begins to take on a more lush appearance.

One of our projects was to visit the ancient pre-Inca ruins on the summit of Samaipata Mountain. Our trip was organized by a local travel agent in Santa Cruz who obliged us by arranging our "tour" to the ruins. Our tour leader turned out to be a young university student who spoke a little English (later we spoke Spanish as our Spanish was as good as her English). She picked us up from our Resedencia in downtown Santa Cruz, waving to us from a local taxi, which turned out to be our "tour bus". After much haggling over price, the driver agreed to the 300 km round trip to the mountains. The car, an ancient, much-abused Datsun, was ill equipped to take us up the arduous road into the mountains, but there were no alternatives immediately available. The lowland landscape west of Santa Cruz is tropical. Bananas, sugar cane and many palms line the pot-holed highway. People's houses line the roadside - simple, homemade shacks - built for outdoor living. The roadside panorama was made up of washlines, kitchen fires, chickens, dogs and pigs intermingling with children busily engaged in games of "futbol". There were also stalls selling everything from produce to clothing and recycled goods. Cars and smoking trucks traveled at crazy speeds, weaving about to avoid the many potholes on the road. After some 50 kilometers the road started winding into the mountains, which at first were covered with dry forest of mostly deciduous trees. Here and there, *Bauhinia* trees showed splashes of brilliant

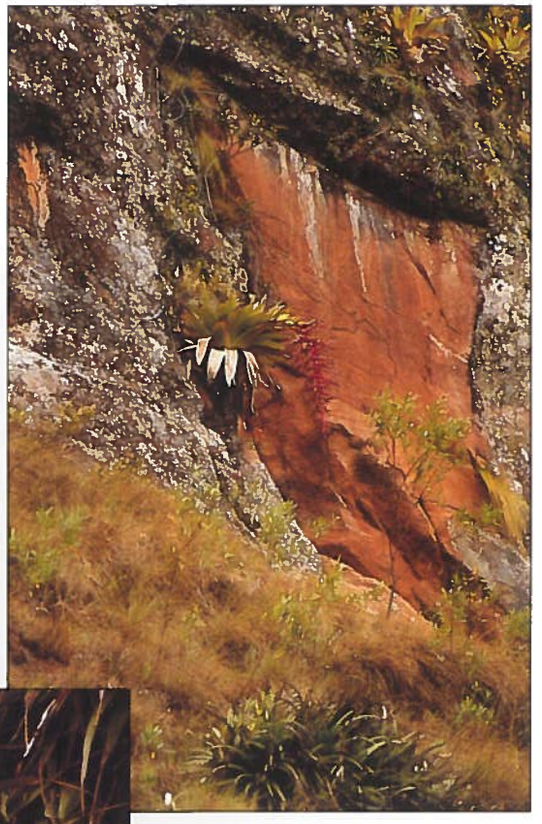

Figure 23.
Bromeliad on cliff, Samaipata, Bolivia. Possibly *Tillandsia maxima.*

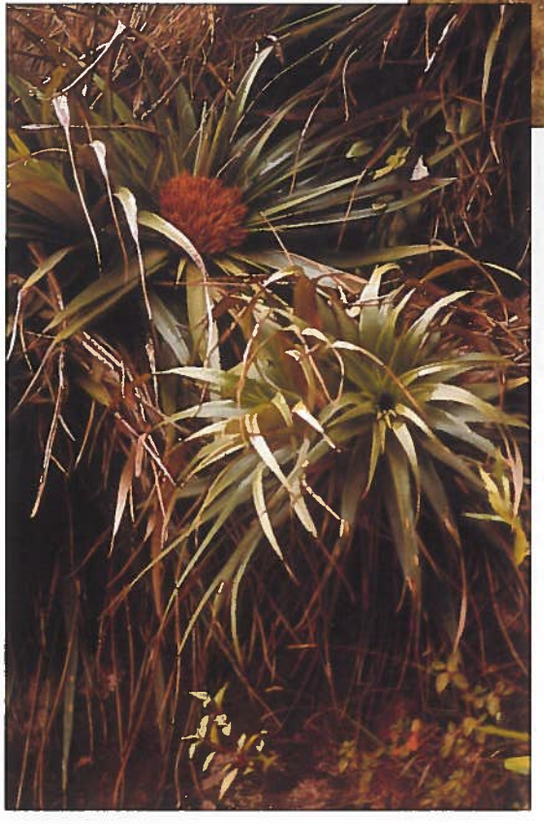

Figure 24.
(three) bromeliads on cliff, identity unknown. Samaipata

purple-pink blossoms. Noticeable also were the many tillandsias growing on trees.

We traveled along a riverbank, making many sharp turns, avoiding slides, piles of rocks, and other obstacles, as we followed the river's canyon. We finally began a long climb. We wound our way to higher ground and into a forest markedly different from the lowland vegetation we passed through earlier. It became noticeably cooler as we passed roadside shacks, often shrouded in mist. Moss laden trees, festooned with orchids, ferns and bromeliads towered overhead. Tree ferns, aroids and lianas formed a massive barrier between us and the dense forest beyond. Here and there, patches of cleared land indicated human presence; cattle could be seen grazing on land often too steep for pasture. Patches of corn and potatoes are a standard adjunct to the very existence of farming in these areas.

Although the distance covered since leaving Santa Cruz was not great, the road seemed never to end. We finally came to an unpaved side road, the only access to Samaipata Mountain. Our struggling taxi, already hot from continuous climbing, turned into a road that began an even steeper ascent. It did not take long before our tired little car let off steam in protest, and a little further on it gave up and refused to go any further. We still had another kilometer or so to reach the top, so we decided to get out of the car to survey our surroundings. Until then, we were too preoccupied with car problems to notice much of the amazing cliff face towering above us. These almost vertical cliffs were literally plastered with giant bromeliads of a kind I had never seen before.

There were two distinct types. One, a broad-leafed, yellow-green colored plant with a large, red, pendulous inflorescence (figure 23), the other, equally large with narrower leaves, its flowers densely packed at the center of the rosette (figure 24).

The first plant had a rosette with a spread of nearly 2 meters. The leaves were 15 cm at the base and tapered to a point (lanceolate), with the length of the leaf blade reaching up to 100 cm. The inflorescence was erect at first, then became pendulous, hanging well clear of the plant. The inflorescence was bright red. The spike was much-branched and about 3 meters in length. These plants are singularly striking in appearance as they grow on nearly vertical cliff faces, apparently thriving on the precarious perch on which they grew. The roots or rhizomes which anchored the plant to the cliff face were about 15 cm in diameter and as long as 50 cm. The arrangement made the plants look as if they were glued to the cliff. It brought a question immediately to mind as to how old these plants were. Because of the altitude, the area is rather cold; hence growth was probably not very rapid. Most of the larger specimens were in flower suggesting they all had reached a climax phase. Like all bromeliads, the rosette will die once flowering occurs. Usually offsets develop to continue their life cycle, but these plants do not seem to develop offshoots, or at least none were observed. How

does this bromeliad grow? Do the "root" appendages grow down or, more likely, do these stem-like organs grow as an extension of the rosette? There were smaller plants observed but they were not numerous.

Interspersed with this plant on the same cliff face was the other giant bromeliad (figure 24). Its leaves were much narrower, bending over as they grew out of the rosette. It also stumped as to its identification. At the center of the rosette of this bromeliad was a large tight cluster of flowers, or what appeared to be an inflorescence structure. Unfortunately the plants were not only out of reach from the roadside, but would also have been too big too handle.

We had to leave with our curiosity unsatisfied. The time we had spent looking at bromeliads allowed our little car sufficient time to cool down and come back to life again. We continued our trek to our original destination, the mysterious ruins of Samaipata, with neither the plants nor their identity in hand.

Landsent, Valley of the Palms.
108 Parker Road, Oratia, Auckland, New Zealand.

Highlights of Board of Directors Meeting

The following is an unofficial summary of the Bromeliad Society International Board of Directors meeting held in Denver Colorado on June 14,1997.

Minutes of the annual general meeting of the of Bromeliad Society, Inc.
The meeting of the Bromeliad Society, Inc was called to order at 08:59 AM. There were no business matters presented for consideration and the meeting was adjourned at 0901 AM.

Highlights from the Minutes of the annual meeting of the Board of Directors of the Bromeliad Society, Inc.
President Jerry Raack called the meeting to order at 0902 AM. In attendance:

John Anderson	Doris (D.D.) Bundy	Jerry Raack
Peggy Bailey	Luiz Felipe de Carvalho	John (Jack) Reilly
Don Beadle	Don Garrison	Carolyn Schoenau
Harvey Beltz	Dan Kinnard	Hattie Lou Smith
Chet Blackburn	Pamela Koide	Bill Soerries
Joyce Brehm	Thelma O'Reilly	Tom Wolfe

Pedro Glucksmann, Keith Golinski, Sally Thompson, and Jacqui Watts, were excused by the President. Clyde Jackson was excused due to a family emergency.

1. The name change from the Bromeliad Society, Incorporated to the Bromeliad Society International was pursued in 1997. Fifty-four- (54) votes were received for the name change and two (2) were against. The name change is official. President Raack will contact Thelma O'Rielly's son, who

is familiar with California incorporation laws, to ensure the change is corrected with the state of California. Existing stock of printed materials and stationary bearing the old name will continue to be used until gone.

2. Don Garrison requested help with speakers for the 1998 World. Bromeliad Conference. All members agreed to help with this. The WBC Committee would like to offer free registration to speakers. There was a discussion on the involvement by the Board and the Directors during the WBC set-up and sales. It was agreed that the Board of Directors meeting be held after the conference rather than the current practice of holding it before the conference. Directors would then be available to help in the setup and registration process, meet and discuss any concerns members from their region might have, and get to know their constituents during the pre-conference. Vice President Tom Wolfe reported that rooms for the conference would be $69.00 per night. The 1998, (13th World Bromeliad Conference) will be July 1-5, 1998 at the Wyndham Greenspoint Hotel, Houston Texas.

3. Treasurer Clyde Jackson was unavailable because of a family medical situation. President Raack presented the treasurer's report. A lengthy discussion of the society's financial situation was held. The society has been operating at a deficit for the past three years and the proposed budget for this year was also a deficit budget. There are approximately 1400 BSI members now and the dues received from them are not covering expenses. There are 76 lifetime memberships. It was estimated that 200 additional members are needed to break even. There was general agreement that belt tightening was needed rather than to continue to draw down on our reserves to cover budget shortages. In this spirit, a number of tough decisions were made, including:

   a. The Membership Secretary generously agreed to accept a reduction of $50 per month in her allowance as well as a reduction in her request for budgeted expenses.

   b. The seed fund chairman agreed to a reduction in the amount he receives in handling seed sales.

   c. Reduction in expenses as originally requested was made in most other budget areas including the Journal; the Judge's Handbook, and the slide library.

   d. Don Beadle has donated his old computer for use by the Membership Secretary.

4. It also was agreed that in future budgets, fixed assets would be separated from the BSI Library in inventory accounting.

5. Although there is some justification for reimbursement, the Board decided as a matter of policy that e-mail expenses should not be reimbursed to any

officer or director even though e-mail is becoming increasingly important in the conduct of the society's business. All but three officers and directors currently have e-mail addresses.

6. The 16,000 remaining culture sheets have the wrong address on them. Carolyn Schoenau, Hatti Lou Smith, Peggy Bailey, Joyce Brehm, and Don Beadle all agreed to divide them up and help stamp the new address and correct the price of the membership dues this help.

7. The credit card issue was discussed. Acceptance of Credit Cards for BSI dues and other income was approved at the Orlando Board meeting but no action has taken place during the year following to implement it. Don Garrison volunteered to take charge of this and work with Clyde Jackson to begin implementation. Joyce Brehm volunteered to give the terminal and the card readers to the BSI. This will be accomplished as soon as possible. These offers were gratefully accepted. The mechanics were briefly discussed. The number can be written onto a voucher and mailed to the treasurer for deposit into the account. Tax on the charges was discussed without resolution. We will accept only MasterCard and Visa at this time.

8. The Morris Henry Hobbs and Foster awards given free to societies that have standard shows costs $1000.00 per year. Clubs that are not affiliated should not receive these awards. but it is currently difficult to ascertain whether some societies are currently affiliated or not.

9. Very few people are voluntarily sending in cultivar registrations and the cultivar listing is currently progressing slowly. There will be a new Cultivar listing available by the World Conference in 1998. Don Beadle will cover the cost of printing and be reimbursed from the sales. All income above cost will go to the BSI. The listing will contain a description of the cultivars, not just the crosses and hybrid names Don needs descriptions for the blooming neoregelias. The cost of publication may run $2500.00 for about 500 issues. They will sell for $25.00 to 30.00 each.

10. The Judges Certification Committee (JCC) is underway. Although the funds to do so are not currently committed, the Board of Directors voted to revise the handbook. The report states the handbook is being re-written. It was confirmed through Jerry Raack's conversation with Flo Adams that this is the case. The Board of Directors will exercise their right to review the new Judges Handbook prior to publication. Don Garrison paid for the cost of the scanning, which was donated to the BSI and should not be included in the budget. There are 121 judges + 20 student judges. In the last 2 years, only two handbooks have been sold in spite of the fact that the Judges Handbook states a Handbook is required for every student judge. The board agreed not to budget funds for rewriting the Handbook until it is presented to the Board of Directors for review. The Board of Directors is composed of 21 Accredited Judges.

11. President Jerry Raack requested that in the future, all budget requests for expenditure should be formatted to include plans for recovery of the costs

12. The nominations committee nominated Gene Schmidt for Affiliated Societies Chairman and Christopher Krumrey as Slide Program Chairman. Both men were elected as were the incumbents in all other Committee positions. The nomination deadline for the 1998 elections of directors is March 1998. We will need one Director each from California, Florida, Louisiana, Texas and International. Committee Chairs are reviewed and elected annually.

13. The BSI web page is currently putting up sites for "round-robin" type pages so readers can discuss their special interests. *(note: 8-23-97: this has been initiated).* Enthusiasts worldwide have helped provide information. Web address is BSI.ORG . The expenses for this year were $640.00 . When we put more pictures out the cost may increase to $40.00-42.00 per month. There have been 1800 "hits" on the web site and about 20 new members have joined through the web page since it was initiated last year. A permanent new committee, to be known as the "Web Site Committee" has been added to the organizational structure with Dan Kinnard elected as committee chairman. There was discussion regarding the by-laws and adding this committee. President Raack suggested that we amend the bylaws to remove the names of the committees in 13E. The motion to do this was passed. The list of committees will be replaced by stating, "See standing rule 6 under A". The standing rules will be added to recognize this committee. Dan will write a description of the position and send to the Recording Secretary for inclusion into the by-laws and standing rules.

14. The decision was made that the director of the Mulford B. Foster Bromeliad Identification Center (BIC) should be included in world conference planning. This will be brought to the attention of the current and future world conference chairs.

15. There was a lengthy discussion of the dues structure, postage rates, and the probable need to raise dues. It was agreed that the dues should be separated from postage. Therefore, dues would be the same worldwide, but additional postage would be required for anything exceeding bulk rate (third class) within the United States. International members will need to pay either surface or airmail costs, and members within the U.S. who want delivery by anything other than bulk rate will bear the cost. A discussion of membership dues was held. The dues need to be increased, but it has been only 2 years since the last raise. The motion to raise dues was tabled but unless there is a substantial increase in BSI membership, the 1998 board meeting in Houston will need to either raise the dues or cut back further on costs. Postage rates were increased slightly to cover actual costs. The new rates are: $8.00 for international surface mails, $18.00 for airmail, and $10.00 for domestic first class mail. All amounts are in U.S. currency.

16. All back issues of the Journal have been removed from storage in Orlando. 100 of each issue were mailed to Sally Thompson to add to the sales inventory. The sales of all back issues have been concentrated in the hands of Publications Chair Sally Thompson. In the past, they were scattered by date of issue.

17. Pam Koide reports that the glossary is expected to be completed for the 1998 WBC, The funding which has not been used ($2,000.00) will be carried forward into 1998.

18. The decision was made that the BSI would be the primary entity responsible for planning all future world conferences beginning with the year 2000. In the past, the job was designated to a local affiliate (or affiliates). Joyce Brehm was appointed to head a special committee to develop a plan to make the transition. The plan will be presented to the board at the 1998 Board of Directors meeting in Houston.

19. A long discussion concerning the relationship between the BSI and local societies was held. The BSI needs to become more important to local societies. Conversely, the local societies need to recognize that a strong BSI is critical to their own survival. The probable need for a re-affiliation process was also discussed. The By-laws state what needs to be submitted to be affiliated, but these bylaws have not always been followed. There are societies that have been getting the Journal and being called affiliates that are not truly affiliates. Special discounts to BSI members for books, pins, the WBC conference and plant sales, etc, were discussed, as was the possibility of a lower membership category with cheaper dues but without the benefit of receiving the Journal. Don Beadle was appointed to chair a special committee (The long-range Planning Committee), with a long-range goal of redefining the relationship between the BSI and the local societies. Ideas are earnestly solicited.

    The new Affiliate Chair will meanwhile send a letter to all affiliates requesting a listing of the officers, as well as a copy of their charter, and their by-laws. He will also send a copy of the BSI by-laws to each affiliate. It may be necessary for some societies to re-affiliate. A copy of the BSI by-laws will also be posted on the web site.

20. Tom Wolfe was appointed to chair a product development committee. Their goal will be to create BSI products to sell at the 1998 world conference. Many possible items were discussed (screen-savers, coffee mugs, etc.). Tom will work with the Houston group to assure that we are not in competition with them for sales of similar products. Selling the membership list (we have had requests) will not be an option.

21. The membership list will not be published on the web site. Advertisers in the Journal are to be moved to the head of the suppliers list on the web site. The programs available through the slide program chairman will also be published on the web site. The listing will also appear periodically in the Journal.

22. A set of available issues of the Journal will be sent to the Brazilian Society for the cost of shipping. The BSI will also donate a set of Journals (of available issues) to any affiliate who pays the postage. Tom Wolfe will handle the coordination of getting the extra copies to the affiliates.

23. The by-laws will be changed to allow board members to vote by e-mail if they so desire. Board members who do not have e-mail access will be contacted by telephone or U.S. mail. Jerry Raack will write the specific wording for the bylaw change.

24. Issues pertaining to centralized purchasing and membership cards were tabled, although Bill Soerries will work on a proposal for membership cards to present at the next board meeting.

25. A motion to include the immediate past president as an officer for one year was approved.

The Board of Directors meeting was adjourned at 8:30 P.M.

FINANCIAL REPORTS

Balance Sheet as of 12-31-96

	1995	1996
CURRENT ASSETS		
Cash – Gen Fund Spec	$ 48,220.73	$ 40,459.59
Cash – Life Membership Spec.	$ 14,103.70	$ 15,588.46
Cash – Padilla Endowment	$ 5,448.71	$ 4,966.30
Cash – Dayton State Bank	$ 14,076.22	$ 11,972.93
Cash – WBC Funds	$ -----	$ 2,500.00
Total Cash	$ 81,849.36	$ 75,487.28
ADVANCES		
Seed Fund	$ 200.00	$ 200.00
WBC – Orlandiana i96	$ 2,500.00	$ -----
Total Advances	$ 2,700.00	$ 200.00
FIXED ASSETS		
Equipment – Editor	$ -----	$ 411.89
Equipment – Membership Secty.	$ -----	$ 210.94
Library & Equipment	$ 5,728.39	$ 5,728.39
Less Depreciation	$ 2,089.54	$ 2,089.54
Total Depreciated Assets	$ 3,638.85	$ 4,261.68
OTHER ASSETS		
Investments – Unisys shares	$ 200.00	$ 200.00
Investiments – USTN	$ 14,665.65	$ 14,665.65
Inventory – Awards	$ 5,106.58	$ 5,016.58
Inventory – Publications	$ 23,563.28	$ 23,563.28
Inventory – Membership Secty	$ 1,975.00	$ 1,975.00
Inventory – Journal	$ 67,763.00	$ 67,763.00
Total Other Assets	$ 113,183.51	$ 113,183.51
LIABILITIES		
BSI Memorial Fund General	$ 125.00	$ 125.00
Accruals	$ 5,000.00	$ 5,350.00
Total Liabilities	$ 5,125.00	$ 5,475.00
NET WORTH	$ 196,246.72	$ 187,657.47

INCOME STATEMENT FOR 1996 AND APPROVED BUDGET FOR 1998

(Merged to conserve space)

RECEIPTS	Actual 1996	Budgeted 1998
Journal advertising	$ 2,105.33	$ 2,500.00
Roster advertising	$ 700.00	$ -----
Journal back issue sales	$ 244.00	$ 125.00
Color fund donations	$ 1,622.00	$ 2,200.00
Sale of cultural sheets	$ 155.00	$ 160.00
Donations	$ 187.50	$ 300.00
Interest from general fund	$ 3,213.05	$ 3,200.00
Interest from endowment fund	$ 1,467.69	$ 1,500.00
Judges certification items sold	$ 37.50	$ 100.00
Medallions & trophies sold	$ 1,254.40	$ 500.00
Memberships	$ 32,855.54	$ 34,500.00
Life memberships	$ 750.00	$ 750.00
Postage refund	$ 246.00	$ -----
Publications sales	$ 9,753.26	$ 10,000.00
Seed fund sales	$ 723.00	$ 700.00
Slide program rentals	$ 100.00	$ 200.00
Additional postage	$ 1,900.00	$ 2,150.00
Membership drive	$	$ 5,000.00
Deficit – general fund transfer	$	$ 1,690.00
	$ 55,414.27	$ 65,575.00

DISBURSEMENTS:	Actual 1996	Budgeted 1998
Affiliated societies expenses	$ -----	$ 200.00
Bank charges	$ 65.75	$ 75.00
Credit card expenses	$ -----	$ 500.00
BSI board meetings	$ 893.30	$ 750.00
Grants	$ 1,945.00	$ 2,000.00
Bromeliad Journal		
Printing/photo work	$ 32,370.56	$ 32,500.00
Postage & mail service	$ 6,380.21	$ 8,000.00
Misc. expenses	$ 981.38	$ 1,000.00
Allowance	$ 2,400.00	$ 3,000.00
Storage	$ 698.54	$ -----
Journal envelopes	$ 2,382.02	$ -----
Judges certification expenses	$ 1,053.49	$ 200.00
Membership contract	$ 6,750.00	$ 4,800.00
Membership expenses	$ 833.44	$ 4,200.00
Membership envelopes	$ 7,583.44	$ -----
Nominations expenses	$	$ 100.00
Publications	$ 2,078.15	$ 2,250.00
Roster	$ 2,690.75	$ -----
Recording secretary expenses	$ 43.59	$ 300.00
Slide program	$ 110.93	$ 300.00
President Expenses	$ 4.77	$ -----
Seed fund	$ 648.39	$ -----
Treasurer expenses	$ 66.38	$ 100.00
Weevil Program	$ 1,300.00	$ -----
Glossary expenses	$ 306.87	$ 2,000.00
Web site	$	$ 1,000.00
Product development/acquisition	$	$ 1,000.00
New membership expenses	$	$ 1,300.00
	$ 64,003.52	$ 65,575.00
Total gain/loss for 1996	($ 8,589.25)	

TRANSFERS –INCOME/EXP			
Grants		$ 1,945.00	
Interest – Spec. Accts.	--	$ (4,500.96)	
Charges – Spec. Accts.		$ 64.75	
Life Memberships	--	$ (750.00)	
Accruals – Current Year		$ 5,350.00	
Accruals – Past Year		$ (5,000.00)	
Transfer Funds		$ 10,000.00	
Equipment Purchased	--	$ (622.83)	
Total Inc/Exp Transfer		$ 6,485.96	
End of period checking account			$ 11,972.93

SPECIAL ACCOUNTS

Year Ending December 31, 1996

GENERAL FUND:	1996	
Beginning Balance		$ 48,220.73
Interest Income	$ 2,284.61	
Bank Charges, Fees	$ 45.75	
Transfers out	$ 10,000.00	
Total Disbursements	$ 10,045.75	
Ending Balance		$ 40,459.59

LIFE MEMBERSHIPS:		
Beginning Balance		$ 14,103.70
Interest earned	$ 748.66	
Life members	$ 750.00	
Total income	$ 1,498.66	
Bank Charges (Disbursement)	$ 13.90	
Ending Balance		$ 15,588.46

PADILLA ENDOWMENT:		
Beginning Balance		$ 5,448.71
Interest – bonds	$ 1,200.00	
Interest – other	$ 267.69	
Total Income	$ 1,467.69	
Bank charges	$ 5.10	
Grants	$ 1,945.00	
Total Disbursements	$ 1,950.10	
Ending Balance		$ 4,966.30

WORLD CONFERENCE:		
Beginning Balance	$ ------	
Refund of advance	$ 2,500.00	
	Ending Balance	$ 2,500.00

BROMELIAD IDENTIFICATION CENTER:		
Beginning Balance	$ 16,930.58	
Interest earned	$ 709.91	
Donations	$ 675.50	
Total Income	$ 1,385.41	
Bank Charges	$ 15.85	
Director Expenses	$ 5,819.00	
Total disbursements	$ 5,834.85	
Ending Balance:		$ 12,481.14

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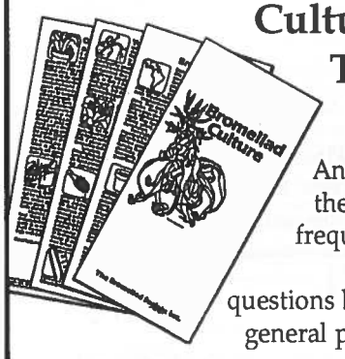

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Text beginning on page 252 describes how *Catopsis* species are used as ritual bromeliads in maize-planting ceremonies because the foliage resembles young corn leaves and the inflorescence is reminiscent of corn kernels. This photo shows some of the nine *zomos* described in the ritual. A 21 inch machete alongside provides size comparison.

Photo by Sylvia Meluzin

Calendar

8-9 Nov

The Caloosahatchee Bromeliad Society will hold its annual show and sale at the Lee County Garden Council & Activities Center, 2624 Cleveland Ave. (U.S. Rt. 41), Ft. Meyers, Florida. Hours are 9 to 5 on Saturday and 10 to 4 on Sunday.

Programs Available in Slide Library

Slide chairman Christorpher Krumrey announces that there are currently nine slide programs available for loan to affiliated societies . The programs are:

- Brazilian bromeliads habitat and homeland
- Costa Rican bromeliad adventure
- Aechmea jewels
- Tillandsias
- The other genera
- The Ensign collection (circa 1950)
- Bromeliads in Paradise 1994 World Conference
- Bromeliads in the red 1994 Southwest Bromeliad Guild show
- Bromeliads, America's plant 1995 Houston Bromeliad Show

Other programs are under preparation. Affiliates are encouraged to contact the slide chairman for information about their content and availability. The cost of renting the programs is $25.00 plus a $25.00 rental deposit which will be returned upon return of the slides. To rent a program or have any questions answered about the programs or the rental policy, please contact:

Christopher Krumrey, BSI Slide Chairman, 5206 Robinsdale Lane, Austin, Texas 78723, Telephone 512-926-3302, E-mail CKRUMREY@tab.com