

**FLORIDA COUNCIL
of
BROMELIAD SOCIETIES INC.
Newsletter**

This Newsletter published by Florida Council of Bromeliad Societies, Inc. & mailed to all paid up members of those Bromeliad Societies of Florida which make up the Council. Non-members may subscribe for \$2.00 per year.

Make checks payable to:

Florida Council of Bromeliad Societies

Mail to:

Carol Johnson, Editor at cover address

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VOLUME XVI - ISSUE III

AUGUST 1996

CATCHING UP - STAYING EVEN

Sometime ago I became owner of the first book printed by Bromeliad Society, Inc. in 1953, published and autographed by Mulford Foster. The book was donated to Orlandiana '96 for the Friday auction and was purchased by Rolfe Smith of Longwood Gardens in Pennsylvania. Before parting with the book I copied an article on "Pollination & Hybridization" by Mulford Foster and it is printed in this Newsletter. I have not seen it in print anywhere else.

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On September 14 we will all get together at Marie Selby Gardens in Sarasota to pat our collective backs after an especially active and productive 1996 growing and showing season. We do this every Fall and call it the annual EXTRAVAGANZA. In this way we wind up our show year, dispose of our extra plants at the plant sale, eat a big dinner, pote a few potables and finish it all off with a plant auction. Sarasota Bromeliad Society will be our hosts this year. Watch for a special mailing in the next few days, after which make your reservations promptly. JUST DON'T MISS IT! See details on the Show Page.

Florida Council met on July 27 at Selby Gardens in Sarasota (busy bunch, eh). Since the meeting was two weeks past the regular date, there will be no minutes published, but I recall the following actions:

1. It was voted to raise the Newsletter assessment to \$2.00 per address annually. Non-member fees will be \$3.00. The \$1.00 per address assessment had been in effect since 1981.
2. Heard a proposal from Karen Andreas to keep FCBS on the Bromeliad Bulletin Board internet since it was so effective in promoting Orlandiana '96. Definite action was postponed until October meeting.
3. By-laws will be amended to encompass Extravaganza rules. This will be done at the October meeting.
4. Discussed the September 14 Extravaganza at great

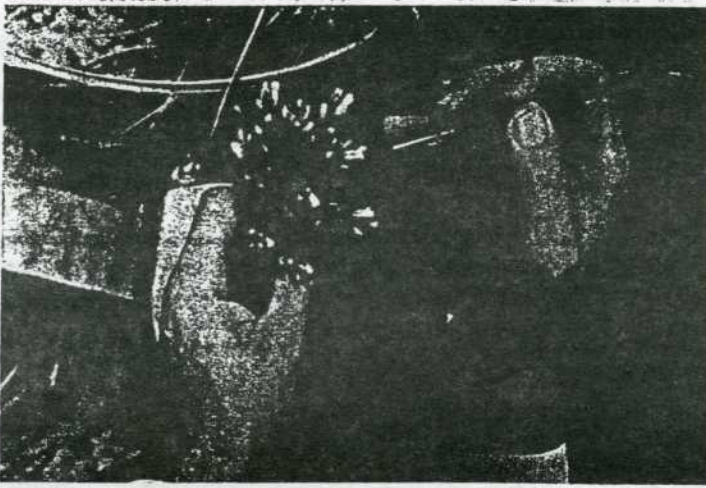
length. The auction this year will be in the evening since daytime auctions do not seem to promote enthusiastic bidding. See the Show page.

This issue includes the annual Florida membership roster. It has been very difficult to prepare this year because so many area codes have been changed. Area codes do not affect mailing, but if yours is listed wrong, please let me know so the correction can be made on the master list. Two or three of our state societies now follow Garden Club pattern of May 31 year ending, which also makes a bona-fide roster doubtful at August 1. Total mailing fluctuates, but averages at least 800 each mailing, which is a far cry from the 250 mailed in 1981. We hope to add two new societies to the Council this year, which will bring the total to 14 Florida bromeliad societies.

On June 13 I received a letter from Hazel Quilhot. On June 15 I was notified that she had passed away on June 14. I reprint her letter herein as a reminder to us all that loneliness, in itself, is a terminal disease. See the Show Page for news of the sale of her plant collection, and honor her memory by attending the Extravaganza at her beloved Selby Gardens.

Ron Schoenau, general plant sale chairman of Orlandiana '96 reported to the Florida Council that the plant sales totalled nearly \$100,000.00. Great! Congratulations to the entire show committee for a great World Conference. The next World Conference will be in Houston, Texas in 1998.

Dr. Ron Cave has selected a graduate student to undertake weevil research on our behalf as reported in the last Newsletter. His name is Diego Alvarez del Hierro from Ecuador. He is a graduate student whose interests are in biocontrol and biodiversity. As FCBS Treasurer, on June 13 I mailed a check in the amount of \$2,300.00 as the first installment of our \$6,900.00 commitment. The next payment will be due in December 1996.



Pollinating the flowers of *Aechmea X Bert*

POLLINATION AND HYBRIDIZATION

by Mulford Foster

Pollination is not difficult with most of the bromeliads, but it does require close attention to the ripening of the stamens and to the pistil during the short period it may receive pollen. This period will differ somewhat among the various species.

With few exceptions, and those principally in the *Tillandsias*, the flowers of the bromeliads last but a few hours. Other exceptions to this rule may be found in many of the *Vriesias*. If they blossom in cool weather the flower may carry over to the second day.

Some species of the bromeliads flower early in the morning and may be gone by midday. One species of *Aechmea* which I found in Brazil baffled me for several days. I finally learned that the petals opened at midnight and by three A. M. those petals were completely disintegrated. By way of contrast the flowers of *Tillandsia crocata* last for four to five days according to the prevailing temperature.

When the pistil and stamens are very short and are far down in a slender corolla of the flower they cannot be seen without carefully removing the sepals and petals so as to expose these reproductory organs. This is the condition in the flowers of *Tillandsia lindenii* or *T. cyanea*.

Some of the giant *Hohenbergia* species such as *H. Saltzmanii* or *H. Blanchetii*, have very small flowers; the petals may be less than an eighth of an inch long and the flower may be completely filled with nectar. All of these different conditions may be met with if you are interested in the pollination of the bromeliads, but be assured that if you are interested enough to study these different conditions, your interest in bromeliads and plant life in general will carry a great and

lasting compensation to the better understanding of all life in its myriad manifestations; you will find parallels everywhere.

Once you have determined the time of day that the flower is completely open and the stamens and pistil are in mature form, then you may procure the pollen on a small camel's-hair brush and carry it to the flower of the plant which you may desire to fertilize.

Your problems of pollinating the flowers will vary with different species. In many flowers you will find the stigma of the pistil extending out beyond the stamens. Such a flower is very easy to pollinate, but in many species the stamens may exceed the pistil or may be of even length. In many flowers the stamens may completely surround the stigma so that they would have to be removed in order to pollinate it with the pollen from another flower. If this be the case, then Plant No. 1, the maternal plant, should be emasculated as soon as the flower is open or mature. This means that the stamens must all be removed very carefully so that none of the pollen falls on the stigma to cause self-pollination. The pollen should then be carried to it from Plant No. 2, the paternal plant. This may necessitate a little practice with a steady hand. If you wish to use Plant No. 2 for the same cross, then the same care should be used in removing those stamens. Now the pollen is carried from Plant No. 1 to No. 2 which will make the same cross with the same results, as each flower has the parts of both sexes.

Should the two species which you wish to cross, mature their flowers at different times of the day, you may find a short period between those two maturity hours that you can pollinate one stigma before it is entirely receptive and the other before it has entirely passed that period and still catch both flowers. But if the time space between the two maturity periods is too great, you may be able to keep the pollen from one plant by taking the stamens and keeping them in waxed paper or in a tightly sealed bottle in the refrigerator for a few hours. I have not been able to keep the pollen of bromeliads for any great length of time, but further experiments may make this a possibility. With some flowers in other families, pollen has been kept for a period from six months to a year.

Should your two subjects be two different true species, then the results of this hybridization will be rather constant. Variation in the offspring will not be very great. However, if one of the parent plants in this cross pollination should be a species and the other a hybrid, or if they both be hybrids, then the offspring will run a most interesting lot of hybrids with the different combinations of character of parents and grandparents.

If you wish to self-pollinate a plant for the propagation of more of the same species, then you carry your brush from flower to flower back and forth from plant to plant, thrusting carefully your brush into each flower, being sure that each stigma is covered with pollen.

Rarely will your bromeliad flowers under cultivation be pollinated unless you do it artificially, as there appear to be few insects that are attracted to them. We believe that most of the pollination of bromeliad flowers in their natural state is performed by humming birds and night moths. In some instances, however, the ants and bees have been the pollinators, especially with flowers that carry considerable nectar. The pollen is not dispersed by wind because it is of a semi-moist nature.

Then the rare exception of self-pollination may be found in such species as *Guzmania graminifolia* and other new species of *Guzmania* which I found in Colombia in 1946. The flower heads on these plants were entirely encased in a jelly-like substance, thus preventing any insect from entering the flower. Also, there are a number of other species that bear flowers which never open, and yet they produce seeds without any outer agent of pollination. In these instances, no doubt, the flowers are self-pollinated.

Most species of bromeliads have a number of flowers on each inflorescence, but the range in quantity may vary from a single flower, as in *T. usneoides* to as many as 8,000 in *Puya raimondii*. This giant *Puya* has a flower head twenty feet long and eight feet in circumference which holds these myriad flowers.

Nearly all the bromeliad flowers function as perfect flowers, that is, they contain the reproductory organs of both sexes. However, there are exceptions. The Hechtias have both parts, pistil and stamens, but only one sex can function in each flower. Some plants, considered as male plants, will have flowers in which the stamens are perfectly formed while the pistil is aborted and incapable of receiving pollen. In the female plant the flowers have aborted, undeveloped stamens but have a pistil fully developed and capable of accepting the pollen from another plant. A similar condition may be found with some of the *Catopsis* and *Dyckia* species.

With the *Cryptanthus* species there is still another condition. With very few exceptions, and I have examined hundreds of flowers, I have found only male flowers in the center cluster. These flowers are imperfect and have no trace of female parts, but the flowers in the axils of the bracts below the center cluster are invariably perfect, having both sexes that function. The pollen from the center male flowers is fertile and can be used for pollinating, but these flowers are generally spent before the lower perfect flowers appear. The lower flowers can be self-pollinated or can be used for cross pollination in hybridizing.

Self-pollination by hand is not always successful with some species, as it seems that some of them are self-sterile. This condition is still more prevalent among the hybrids. However, it is often the case that, while self-pollination among the flowers on a single inflorescence may not be successful, the pollen from one of those flowers may possibly be successfully used on another similar plant, species or hybrid.

Not always are the results of hybridization an improvement over the parents used, but in most instances they will give the hybridizer an interesting new combination of characters quite worth while. I doubt if anyone can foretell which parent plant will influence the resultant hybrid most. However, after attempting several different crosses by using *Aechmea Weilbachii* as one of the parents, I have as yet to find even one of those crosses to be of any value.

Bigeneric crosses can be most interesting although but few such crosses have survived in horticulture. Some well worth-while *Cryptbergias* have been developed. The cross between *Cryptanthus beuckerii* and *Billbergia nutans* has become common. As in many bigeneric crosses, the flowers are aborted and have little attraction, but as a foliage plant it has a definite decorative value.

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FLORIDA COUNCIL OF BROMELIAD SOCIETIES, INC

TREASURER'S REPORT

Second Quarter 1996 at 6/30/96

Beginning Balance, General Fund	\$ 7,521.94
Deposits	31.00
	<u>\$ 7,552.94</u>

Expense:

Postage, 100-32C	32.00	
BIC Donation, 2 mos.	200.00	
Mr. Print,		
Vol. XVI, #2	368.66	
Mail Vol. XVI #2	<u>85.41</u>	<u>686.07</u>

Balance, Gen. Fund at 6/30/96	\$ 6,866.87
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Beginning Balance,		
Weevil Fund	5,735.33	
Deposits	<u>272.00</u>	
	\$ 6,007.33	

Expense:		
Escuela Agricola *	<u>2,300.00</u>	<u>3,707.33</u>

Balance Per Bank, reconciled, 6/30/96	<u>\$10,574.20</u>
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*Outstanding at 6/30/96

Submitted: Carol Johnson, Treasurer
8/27/96

Until 1930 little had been done in hybridization among the bromeliads excepting in the genera of *Cryptanthus*, *Billbergia* and *Vriesia*, and most of that hybridization was carried on in Europe. Even up until the last ten years, little had been done outside of Europe along this line except in *Billbergia* and *Cryptanthus* by Florida and California hybridizers.

Now with all the new species that have been introduced into horticulture in the past twelve years, the possibilities have been greatly enlarged with a most interesting field at hand for horticulturists to enjoy the privilege and experience of assisting in the creation of new, decorative forms and color combinations in the Bromeliaceae.

THE MORRIS HENRY HOBBS AWARD

Carol Johnson

When the Handbook for Judges & Exhibitors of BSI was revised in the 1980's, provision was made for a separate award in the Artistic division of the show. It was named the Morris Henry Hobbs Award, and is to the artistic part of the show what the Mulford Foster Award is to horticulture. Placques for both awards are furnished free by BSI upon submission of a proper show schedule.

While I cannot speak for the rest of the world, here in Florida we have proceeded to maul the artistic portion of the show (usually Div. IV-B) beyond recognition. If we are to continue awarding the Morris Henry Hobbs award, we had better learn the basics of staging artistic arrangements.

Anyone who is not a bromeliad judge rarely gets to see a show schedule, so it is not surprising that our general membership steers clear of the artistic portion of the show. At the end of this article I have reprinted Category II, Div. IV-B of the last Seminole Bromeliad Society show to illustrate the proper procedure. Also, many of our shows have no central theme, so why do the classes in artistic design have themes? A design is supposed to interpret something and each exhibitor strives to do that better than the other entries in the class, within the same parameters.

REMEMBER!

1. The artistic design section of the bromeliad show is the only part of the show which is competitive. In all other divisions of the show, the exhibits are judged against perfection.
2. Artistic design portion should have at least three preselected theme classes consisting of no more than four entries each.
3. Entries may be volunteer or by invitation, but registration needs to be complete before the day the show is set up.

4. The four entries in each class are judged against one another, and one blue, one red and third and fourth are awarded. Say there are 3 classes, that means 3 blue ribbons, 3 reds, etc. From these three blues is selected **ONE AWARD OF MERIT**, which then vies against the winner of the Decorative Containers (Div. IV-A) for the Morris Henry Hobbs Award.
5. Each class should be filled with four arrangements, but the General Show Chairman may decide to sanction a class with only 3 entries.
6. Any of our Florida societies which plans to award the MHH would be wise to assign a separate committee chairman because it seems to be neglected otherwise.

SECTION B: ARTISTIC DESIGNS

Entries in artistic design shall contain one or more bromeliads or any parts of bromeliads artistically displayed. Other plant material is permitted, but bromeliads must dominate. If dried material is used it may be painted, but fresh plant material may not.

The theme of this show is **FESTIVAL OF RAINBOWS**. This section shall consist of three classes consisting of four entries each, and will be judged competitively (blue, red, third & fourth). Overall winner of Section B will compete with the winner of Section A for the Category II top award. The Show Chairman reserves the right to make this section invitational in order to fill the classes. Exhibitors are urged to pre-register with: Carol Johnson, Judges Chairman; 3961 Markham Woods Rd.; Longwood, Fl. 32779 (407) 333-0445.

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|---|------------------|
| <p>Class 1: MORNING GLORY
Fresh &/or dried material</p> | <p>4 Entries</p> |
| <p>Class 2: POT OF GOLD
Either all fresh or all dry</p> | <p>4 Entries</p> |
| <p>Class 3: LITTLE SILVER LINING
Fresh or dried material, but no more than 8 inches in heighth, width or depth</p> | <p>4 Entries</p> |

Width and depth of Classes 1 & 2 should not exceed 24". Heighth is not limited but should be proportionate. Accessories limited to one (1) per arrangement.

4423 Last Forest Rd
Sarasota FL 34235
June 11, 1996

Dear Carol -

When the Florida Council's newsletter arrived yesterday I was deeply moved by your article "Catching up - Staying even". A lot of those early pioneers are truly gone but not forgotten. Those early years were very special as we were so eager to do all we could to promote bromeliads.

Unfortunately due to failing health - a stroke in Jan & later a heart problem along with emphysema & failing eyesight I will miss this World Conference. Not being able to drive I rarely get to a meeting altho I did make the banquet & auction and had a wonderful time.

Several years ago Wally Berg wisely suggested we use our new & younger members to be active in our shows and this has gotten more persons involved.

When I moved in with my daughter 2 years ago I brought 200+

hromeloch with me to landscape her
1 acre yard. Due to limited working
time (doctor said 3 hours max) I
am still working on it.

The body is failing but fortunately
the mind is in good, but slower,
working order.

Jack Roland, a good friend, keeps
in touch with me by phone as well
a monthly visits. I promised to
take me to see you + Geoff probably
after the conference. You have been
so generous and kind to me so a
visit would be a great picker upper
at a time I need it.

You are a driving force and due
to your knowledge + strength we are
fortunate to have you. - I'm thankful
to know you and wish the best of
everything for you + Geoff.

Sincerely

Hazel N. Quilley

SHOW PAGE

August 17, 1996 (Saturday) NINTH ANNUAL BROMELIAD FANTASY - Seminole Bromeliad Society.
Hours, 9:00 A.M. to 4:00 P.M. at Volusia County Ag Center; SR 44, just E of I-4.
Theme is: BROMELIADS 2000 AND BEYOND.
Displays, plant sales, seminars. Hourly door prizes. Art Hyland, 904-775-9919.

August 24, 1996, 8:00 A.M. Plant sale of Hazel Quilhot collection. Most plants will be \$3.00 and under. For directions and further details call Jack Roland at 1-941-326-9206. Hazel had a big collection, so try not to miss this sale.

September 14, 1996 (Saturday) Annual EXTRAVAGANZA sponsored by Florida Council and hosted by Sarasota Bromeliad Society. Plant sales all day, displays and garden tours, cocktails, dinner and rare plant auction in the evening. **WATCH FOR SPECIAL MAILING.** Reservations required for dinner and motel space. Contact Don Beadle at 941-485-1096. If you wish to sell plants that day, you must secure a grower number.

October 21 thru November 10, 1996. FLORIDA EAST COAST BROMELIAD SOCIETY will have a booth exhibiting bromeliads at the Volusia County Fair.