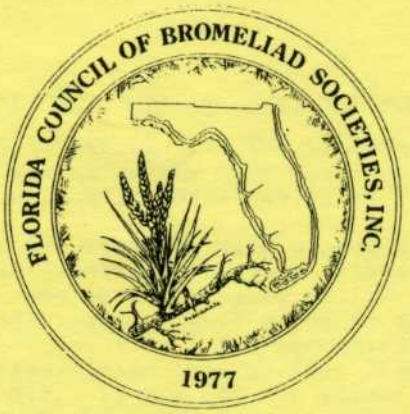


FLORIDA COUNCIL of BROMELIAD SOCIETIES INC.

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

VOLUME XIV - ISSUE I

FEBRUARY 1994

VOLUME XIV - ISSUE 1

1994

CATCHING UP - STAYING EVEN

IT IS A PLEASURE to report that Tom Lineham, editor of the BSI Journal, is making speedy recovery from surgery he underwent in January & is convalescing at his home in Orlando.

THOSE OF YOU who are familiar with a product called SUPER THRIVE will be interested in a story related to me recently. For those of you who have not heard of it, it is a growth stimulant/hormone/vitamin liquid which is diluted in water. Many, many growers use it. I do, sporadically, to water in seedlings and offsets when they go into their first pot of regular potting mix. It was off the garden store shelves for awhile, along about the early 80's, I guess, when the law became effective requiring all fertilizers and pesticides to carry labels listing the ingredients of the product. SUPER THRIVE refused, as the story goes, and were sued by the government. The company claimed a secret formula which, if it became known, would ruin their business. SURPRISE! They won, and the product still carries the same old label with a lot of words and no formula.

MANY THANKS TO Helga Tarver of Florida West Coast Bromeliad Society for setting me straight on a couple of errors in the last Newsletter. She pointed out that Vriesea triligulata is listed in Volume II (Tillandsioideae) of Monograph 14. She's right, somebody put it there since last time I looked. I also mis-spelled "correia-arauji" but, then, doesn't everyone at times?

IF YOU MISSED the announcement re the proposed judging school in the last Newsletter, and are still interested in participating, please contact Betty Ann Prevatt; District Registrar FL-GA; at (813) 334-0242. Those who are interested are very interested, but more students are needed.

THIS ISSUE begins Volumw XIV of the Newsletter. Florida Council will be 20 years old in 1997.

FLORIDA WEST COAST BROMELIAD SOCIETY is preparing for the Extravaganza to be held in Clearwater in September, and in conjunction with their publicity, they request that any society in the Council which has an official logo, please furnish them with a good reproduceable copy. It will be used on a poster. Send to Fay O'Rourke at 1625 Sheldon Dr.; Clearwater, Fl. 34624.

I HAVE ACQUIRED a copy of a beautiful new book entitled "Bromeliads in the Brazilian Wilderness" by Elton M.C. Leme with photography by Luiz Claudio Marigo. Text is in English. The bromeliads are all photographed in habitat and are very beautiful. The trend has been to photograph plants staged in pots and grown to perfection. This book proves that nature still does it best, leaf damage and all. Mr. Leme will be featured speaker at the World Conference in San Diego in June. Hopefully he will bring some copies of this outstandir book to sell.

IMPORTATION PERMITS. The Animal and Plant Health Inspection Service of USDA (i.e., USDA-APHIS) is the organization that maintains inspectors at U.S. ports and airports to exclude pests and diseases of plants. Operating under two federal acts (the Plant Pest Act and Plant Quarantine Act) it will issue permits for importation of healthy bromeliads.

The same organization (USDA-APHIS) also issues permits for importation of insects. It considers insects to be "plant pests" unless proven otherwise. Would-be importers of insects that are actually or potentially useful as biological control agents may be granted a permit to import these insects into a quarantine facilty for study. If study demonstrates that they are specific natural enemies of "plant pests", then USDA-APHIS may grant another permit to release them from quarantine.

Florida, too, has laws designed to exclude "plant pests." So, obtaining a USDA-APHIS permit for insects is a 2-step process: (1) first a Florida review panel meets to consider importation requests, and then, if written approval is obtained, (2) the application is forwarded to USDA-APHIS for federal consideration. I went through this process, and I have a USDA-APHIS permit for importation of *Metamasius callizona* and insects that attack it.

In general, employees of departments of agriculture in other countries are helpful to entomologists from the U.S. looking for potential biological control agents.

All of a sudden, there is a new complication which is caused by the Convention on International Trade in Endangered Species (CITES). The U.S. Fish and Wildlife Service (which is part of the Department of the Interior) now considers insects to be wildlife, and is demanding that anyone importing insects into the USA obtain a Fish and Wildlife permit. The permit must be obtained whether the insects are dead or alive. Further, this is a 2-step process. The would-be importer must first obtain a permit from the country of export if that country is a signatory of CITES and if that country considers insects to be wildlife. Only when the foreign permit has been obtained will the U.S. Fish and Wildlife Service issue its permit. The foreign permit must come from whatever agency in the foreign country is designated - and this agency is seldom the department of agriculture of that country. All of this is designed to protect endangered species. Its foreseen effect on biological control will be to create layers of bureaucracy, delay in obtaining permits, and expense in fees required for these foreign permits. It looks as if obtaining a permit to import biological control agents of *Metamasius callizona* from, for example, Costa Rica, will take months and cost at least $150.

FLY PARASITE. As reported previously, *Metamasius quadrilineatus* larvae in bromeliads in Honduras were found last year parasitized by larvae of a parasitic fly belonging to the family Tachinidae. Under a USDA-APHIS permit, *Metamasius callizona* larvae were brought from Honduras to a quarantine facility in Gainesville in

June. Twelve of them were discovered to be parasitized by fly larvae, which, when they were fully-grown, became fly pupae. Unfortuately, not one of these 12 pupae produced a living adult fly. I suspected that conditions were very moist in nature where the weevils were found in Honduras (a cloud forest) and I had made sure that pupae were kept in wet conditions in the quarantine facility: it did not work. The exercise was repeated in October with more fly larvae from Honduras and a different method of keeping them moist, but again it failed.

It is essential to obtain adult flies for study in the quarantine facility. We must have enough flies for testing the range of insects they attack. If they attack *Metamasius callizona* larvae (and do not attack non-target organisms), then we will be able to obtain a USDA-APHIS permit for their release in Florida. But we must be able to produce large numbers of them for release! At present we do not have even one good specimen of an adult fly; good specimens of adults are needed for precise identification.

The next step is to be an attempt to catch adult flies in Honduras. This demands constructing traps of hardware cloth. I have designs for traps that have been used successfully to catch other tachinid flies (which parasitize other insect species). The bait in these traps must be bromeliad tissue and *Metamasius callizona* larvae. This work must be done by students in Honduras under the guidance of Dr. Ron Cave.

VENEZUELA. In July I attended an entomological meeting in Venezuela. There I encountered Dr. Jorge Salas who is working on weevil pests of pineapple in the Venezuelan state of Lara. Two weevil genera are involved: *Cholus* and *Metamasius*. *Metamasius dimidiatipennis* is the species of concern. It also attacks pineapple in Colombia, Ecuador and Panama. Dr. Salas' responsibility is to pineapple growers, and he has not yet investigated the range of other bromeliad genera that *M. dimidiatipennis* will attack. But here's another *Metamasius* species that we do NOT want in Florida.

GAINESVILLE. The greenhouse colony of *Metamasius callizona* is thriving. John Watts, the part-time technician who is assigned to maintaining it, has discovered that the weevils do very well on pineapple tops. He is able to get a supply of tops from a local Publix grocery store. He roots them in soil in plant pots, and puts the pots in the greenhouse. Female weevils readily lay eggs in them, and John is later able to recover 3 or 4 fully-grown weevil larvae from each pineapple top.

Howard Frank
(904) 392-1901 ext. 128

7 January 1994

WHAT IS A BROMELIAD ?

by

Carol Johnson

It was the early sixties when I discovered my first bromeliad, a Billbergia pyramidalis blooming in a lake front garden in the neighborhood of Leu Gardens in Orlando. Someone told me it was a bromeliad (bromelaid?) and I began searching for information about these fascinating plants. Encyclopedias and garden books made no mention of them. A plant catalog from Oakhurst Gardens (Mr. Giridlian) in California furnished me the only clues, and listed some for sale. I still have the original Acanthostachys strobilacea which I purchased from that source. Best of all, the catalog mentioned the Bromeliad Society, Inc. and it's Journal. In 1970 I became a member of BSI and it has been a mainstay of pertinent information for all these years. A very few specialized books are available, but forget the general plant reference books and encyclopedias. The 1992 World Book limits it's discussion of bromeliads to one paragraph, and my garden encyclopedia (out of date, to be sure) describes them vaguely as "tropical plants propagated by division in the Spring".

We all know that our Earth consists of three forms, mineral, vegetable and animal. In the beginning Earth was a ball of minerals upon which the vegetable forms eventually evolved. Animals (including man) came last. In the world of plants, the bromeliaceae are relative newcomers. They occur only in the Western Hemisphere, which gives rise to speculation that they evolved following the phenomena known as continental (tectonic) drift. Make paper cut-outs of the continents of the world along their shores, fit these pieces together like a jig-saw puzzle, and it is easy to see why the theory of one original large land mass is a valid one. Members of nearly all other plant families are found in one form or another world-wide, but not bromeliads. And, since continental drift occurred (give or take) fifty million years ago, even the bromeliads have taken a long time to evolve to their present form. Following learned supposition, the Pitcairnioideae evolved first, most likely as an aberration of the grass family (also monocots). Looking at the form of the Pitcairnia genus, this is easy to read. The Tillandsioideae came next. These two subfamilies are fairly stable and it is difficult to cross-breed between the genera. Although there are claims of successful bi-generic crosses in the Pitcairnioideae, I seriously doubt that the progeny is anything but a selfing of one or the other of the parents. The Bromelioideae subfamily is the new kid on the block and the plants are very unstable. Cross pollination of the various genera is a breeze. In my greenhouse bi-generics are regularly produced by accident among the various Bromelioideae genera. The newest is an accidental X Canmea (Aechmea chantinii and a travelling salesman?). Heaven knows what cultivated Bromelioideae species will look like 100 years from now.

What is a bromeliad? I have drawn up a chart which traces the bromeliads all the way through to the individual species. There are many more plant families in the monocotyledons (monocots) besides the Bromeliaceae, but it is not my intention to write a book. I will say there has been, and still is, a lot

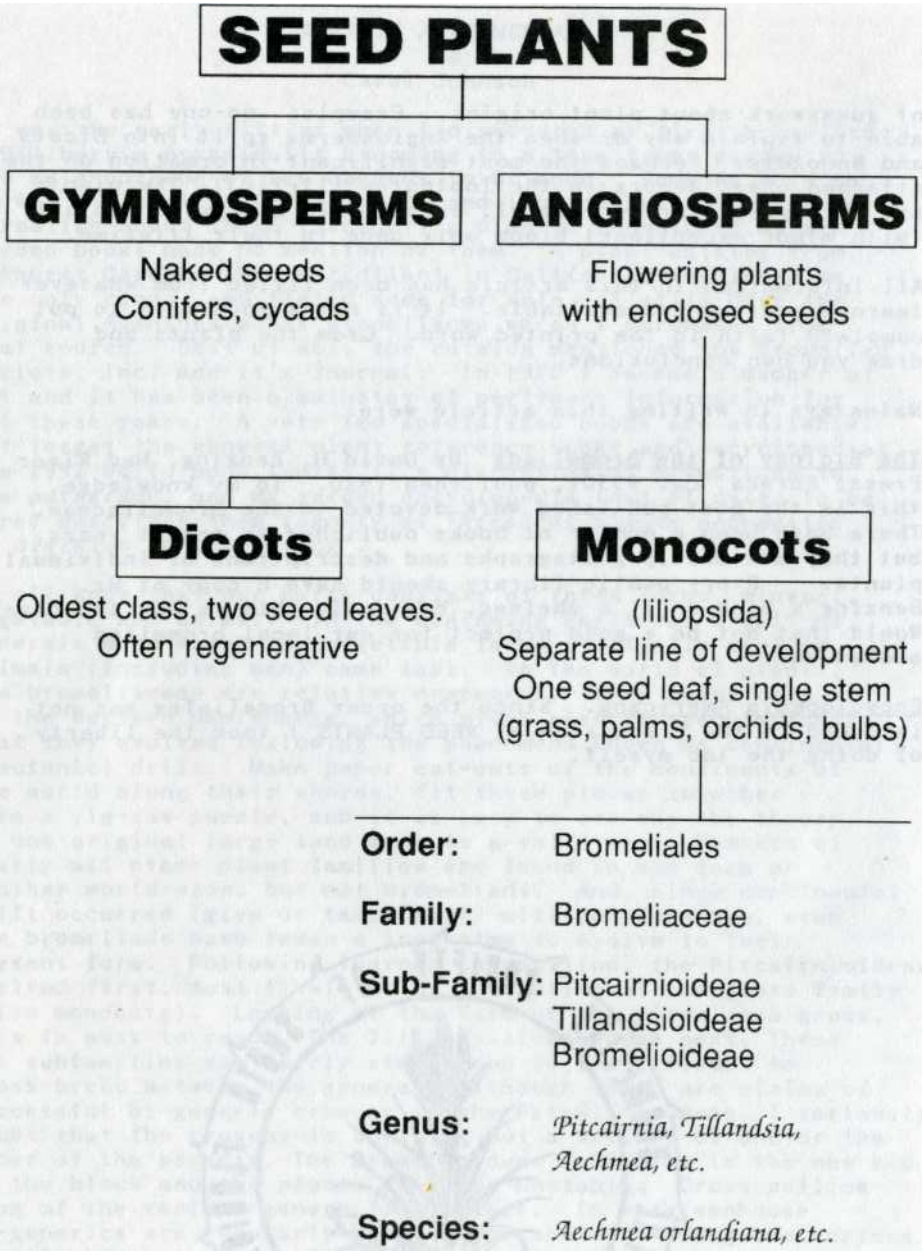
of guesswork about plant origins. Example: no-one has been able to explain why or when the Angiosperms split into Dicots and Monocots. Perhaps the most significant information on the attached chart occurs in the footnotes (1)(2)(3). The plants are epiphytic &/or terrestial, or strictly epiphytic and all (with minor exceptions) bloom only once in their lifetime.

All information in this article has been lifted from whatever learned sources are available. It is not a good idea to put complete faith in the printed word. Grow the plants and draw you own conclusions.

Mainstays in writing this article were:

The Biology of the Bromeliads by David H. Benzing, Mad River Press; Eureka, Ca. 95501, published 1980. To my knowledge, this is the best published work devoted to the Bromeliaceae. There have been a number of books published in recent years, but they are mostly photographs and descriptions of individual plants. Every public library should have a copy of Mr. Benzing's book on it's shelves, but sadly this is not the case. Would that not be a good project for our local bromeliad societies?

Encyclopedia Americana. Since the order Bromeliales was not included in the discussion of SEED PLANTS I took the liberty of doing the job myself.



(1) facultative epiphytes.
(soil grown or mounted)

(2) obligate epiphytes
(no soil)

(3) monocarpic. Blooming once in a lifetime.

UNIVERSITY OF
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Mrs. Carol Johnson
3961 Markham Woods Road
Longwood, FL 32779

25 January 1994

Dear Carol:

I received and enjoyed the latest FCBS Newsletter. A couple of updates, please about *Mosquito production from bromeliads in Florida*, IFAS Bulletin 877 (1990).

The bulletin was free to anyone in Florida who wrote for a copy. The stocks disappeared rapidly after publication, and I suspect this was due to requests by mosquito control districts. Even though several thousand were printed, I'm told they've all gone. Apparently it's up to me to arrange to get it revised and reprinted, if there's continued demand for it. These days, because of a greatly reduced budget, IFAS is reluctant to make such publications available freely. Therefore, the bulletin is likely to re-emerge as a "priced publication" which means that it will cost a dollar or even two.

The final draft was written, with Al Muzzell's input, in 1989, and was published in 1990. Since then, two things have happened.

(1) the (major pharmaceutical) company that was capable of, and interested in, marketing *Bacillus sphaericus* has decided that the potential market just isn't big enough to justify registration, production, and advertising costs for this promising biopesticide. So, it is NOT commercially available now, after all. I don't know what will happen in the future. Technically, production is not very complicated: a small company **could** produce enough to satisfy the Florida market. However, there are economies of scale and, perhaps, better quality control, in large-scale production.

(2) A "new" mosquito has entered the scene. It is *Aedes albopictus*, the so-called Asian tiger mosquito. It (probably its eggs) arrived in Houston, Texas, in scrap tires imported from Japan for recycling. It then began to spread through the southern states. It was first reported in Florida in 1986. As of mid-1993 it had colonized almost all of Florida. The females put their eggs into water-holding scrap tires, tin cars, flower vases in cemeteries, and other similar man-made receptacles. Unfortunately, the females **will** lay their eggs in bromeliad leaf axils. It seems they stick them to the sides of leaves just above the water-line. The eggs hatch when the water level rises. The resultant larvae do quite well in bromeliad leaf axils, but apparently do less well when *Wyeomyia* mosquito larvae are present (maybe there is

competition for food, and *Wyeomyia* larvae are adapted for this habitat and are good competitors). This means that *Aedes albopictus* larvae are comparatively more abundant in bromeliad leaf axils from about Orlando northward than they are from Orlando southward (where *Wyeomyia* mosquito larvae occur commonly).

Aedes albopictus is a known vector of dengue fever and yellow fever in the tropics, but we have not had outbreaks of these diseases in Florida for a great many years. These diseases seem no longer to be present in Florida and, while that remains so, they cannot be transmitted here.

Traditionally, the mosquito vectors of encephalitis viruses (Eastern Equine Encephalitis, St. Louis Encephalitis, etc.) in Florida are *Culex* mosquitoes. For example, the vector of St. Louis encephalitis in Florida is a mosquito (*Culex nigripalpus*) whose larvae seldom if ever occur in bromeliad axils - they occur in flooded ditches, and in waste-water retention ponds. These are dangerous diseases which **do** occur in Florida. Wild birds act as reservoirs for them, and sometimes they spill over into the human population. Mosquito control districts monitor their presence by placing chickens ("sentinel chickens") in outdoor cages, and then testing their blood for evidence of the virus; if the test shows presence of the virus, then there are mosquitoes transmitting the disease in that area. Most likely those mosquitoes are *Culex nigripalpus*. Outbreaks of St. Louis Encephalitis in 1990 and Eastern Equine Encephalitis in 1991 received a lot of news coverage.

Unfortunately, the Eastern Equine Encephalitis virus has been isolated from *Aedes albopictus* at a scrap tire dump in Polk County. And *Aedes albopictus* has been shown experimentally to be able to vector both Eastern Equine Encephalitis and St. Louis Encephalitis. So now we have a new, unknown factor: to what extent will *Aedes albopictus* contribute to transmission of encephalitis viruses? One thing seems certain: if there were to be an outbreak of either of these diseases in your area, and your bromeliads were found to harbor *Aedes albopictus* larvae, you would be in violation of Florida laws (Statute 386.041, Nuisances injurious to health).

And also, Webster's dictionary claims that the plural (in English) of mosquito is mosquitoes.

Best wishes,
Sincerely,

Howard

J.H. Frank

FLORIDA COUNCIL OF BROMELIAD SOCIETIES, INC.
Minutes of Business Meeting Held January 8, 1994
Hosted at the Home of Connie Johnson, Miami, Florida

PRESENT: Representatives (Reps) from Caloosahatchee (Betty A. Prevatt & Eleanor Kinzie), Central Florida (Ed Hall), Imperial Polk (Whit Merrin & Carl Perryn), Jacksonville (Carolyn Schoenau), Sarasota (Wally Berg & Jane Dahlin), Seminole (Charles Tait), South Florida (Nat DeLeon), and Tampa Bay (Tom Wolfe) and the Treasurer (Carol Johnson).

ABSENT: Reps from West Coast, West Pasco and Florida East Coast.

OTHER GUESTS: Polly Pascal and Anne Kauffman from the Bromeliad Society of Broward County, Ron Schoenau, Marie Bessellien, Gene McKenzie and Connie Johnson, our host.

1. **Call to order:** The meeting was called to order by Carol Johnson, Treasurer, at 1:30 pm. Neither Fay O'Rourke (past-chair), Bob Steiger (new chair), nor Bud Martin (new vice-chair) could be present. Fay will turn any written materials directly over to Bob. The secretary, Carolyn Schoenau, will contact the outgoing secretary, Art Hyland, for any materials she may need.

2. **Secretarial report:** The motion was made and seconded that the minutes of October 16, 1993 be approved as written. Carol requested that the secretary send the minutes on 1-2 pages of camera ready material.

3. **Treasurer's report:** Carol distributed a written treasurer's report. Carol stated that she now is using the new Panasonic printer. The report for period ending 12/31/93 showed a total balance of $17,730.94 ($7,348.94 in the general fund and $10,382.00 in the weevil fund). The treasurer's report was accepted as presented.

UNFINISHED BUSINESS

4. **BSI Journal subscriptions to Central American Botanical Gardens:** The Council will not be coordinating BSI Journal subscriptions to Central American Botanical Gardens. Carol returned checks to Caloosahatchee ($32.50), Central Florida ($65.00) and Tampa Bay ($32.50) for contributions previously made. Any society wishing to sponsor such a project should contact Harry Luther directly for information.

5. **Weevil report:** The weevil report was presented by Ron Schoenau and, via long distance speaker telephone, Howard Frank. Dr. Frank had written a two-page report which was distributed. Dr. Frank covered the difficulties involved in importing insects. It is necessary to deal with USDA-APHIS but now, because of CITES, the US Fish and Wildlife Service is also involved. Further complication and cost results if the country of origin considers insects to be wildlife. Slides were shown of another weevil genus (Cholus) which attacks pineapple; Cholus is not known to be in the US. He reported on the problems he has encountered in producing living adult parasitic flies. Dr. Jorge Salas who is conducting related research in Venezuela is now collaborating with Dr. Frank in some areas. The greenhouse colony of Metamasius callizona is thriving in Gainesville. The weevil does very well in pineapple tops from Publix. Dr. Frank will prepare and send Carol Johnson a copy of a budget of anticipated expenses for the calendar year 1994.

6. **Responses to proposed judges school poll:** Betty Ann Prevatt presented the results of the poll for the proposed judges school. She has received a total of nine responses. Since 20-25 participants are needed to make the judges school financially feasible, this item will be discussed again at the April Florida Council meeting. Each society representative was asked to solicit interested participants at his/her January or February society meetings.

7. **1994 Extravaganza:** Carolyn Schoenau reported for Fay O'Rourke that the Extravaganza will be September 10, 1994 at the old Las Fontanas restaurant in Clearwater. The cost will be approximately $15 per person for a sit down dinner. Maps and further information will be distributed later. Anyone having specific questions, please call Fay.

NEW BUSINESS

8. **1994 Officers:** Bob Steiger, Chairman, West Pasco, Bud Martin, Vice-Chairman, Seminole and Carolyn Schoenau, Secretary, Jacksonville.

9. **Tom Lineham:** Carol Johnson reported that Tom Lineham had had open heart surgery on Friday, January 7, 1994.

10. **April Florida Council meeting:** The will be hosted by the Seminole Bromeliad Society.

11. **Membership dues and assessments:** Since no representative from the Florida East Coast Bromeliad Society was present, Chuck Tait presented a request from that society for a waiver of the annual assessment and membership fee. FECBS, a new society, pleads penury due to start-up costs. Discussion followed concerning the pros and cons. Betty Ann Prevatt moved, seconded by Tom Wolfe, that the membership dues and assessments should remain as they have been in the past. Motion was carried without dissent.

12. **Judging school instructors:** There was some discussion concerning the process to become an instructor. It was pointed out that a prospective instructor must submit an outline of what he/she is planning to teach before approval can be granted.

13. **Caloosahatchee Bromeliad Society Representatives:** Betty Ann Prevatt reported that she and her mother, Eleanor Kinzie, are alternate reps 1994. Sam and Hattie Lou Smith are the reps.

14. **World conference sites:** Tom Wolfe reported that in his BSI role, he was looking for sites for the 1996 World Bromeliad Conference. Caloosahatchee is considering hosting the conference if appropriate space can be negotiated with either a hotel or the city of Fort Myers.

There was no silent auction.

The meeting was adjourned at 3:20 pm.

Respectfully submitted:

Carolyn Schoenau

Carolyn Schoenau, Secretary 1994
Florida Council of Bromeliad Societies, Inc.

FLORIDA COUNCIL OF BROMELIAD SOCIETIES, INC.

TREASURER'S REPORT

For Calendar Year 1993

GENERAL FUND:		
Beginning Balance, 1/1/93		6,825.90
Deposits:		
First Quarter	53.00	
Second Quarter	88.00	
Third Quarter	3,065.50	
Fourth Quarter	58.00	$ 3,264.50
General Funds Available		$ 10,090.40
Expense:		
File Cabinet, Freight & Supplies	231.51	
1993 Bulk Mail Permit	75.00	
Tru-Dimension Printers Vol. 13	1,131.80	
Mail Volume 13, 4 issues	257.91	
Corp. Filing Fee, St. of Florida	61.25	
Postage	29.00	
Radio Shack, Misc. Supplies	49.43	
Extravaganza Mailing	168.68	
Extravaganza Speaker's Fee	200.00	
Establish Petty Cash Fund	35.00	
Panasonic Printer	358.40	
5,000 Mailing labels	22.43	
FCBS Chairman Exp. 1993	46.05	
Ppd. 1994 Bulk Mail Permit	75.00	2,741.46
Balance, General Fund, 12/31/93		$ 7,348.94

WEEVIL FUND		
Beginning Balance, 1/1/93		$ 7,738.40
Deposits: First Quarter	260.00	
Second Quarter	1,193.00	
Third Quarter	635.00	
Fourth Quarter	555.60	2,643.60

Weevil Fund Balance at 12/31/93, $10,382.00
There were no disbursements from this fund in 1993.

BALANCE IN BANK AT 12/31/93 $ 17,730.94

Balance in Petty Cash 12/31/93 $27.62

Carol M. Johnson, Treasurer

SHOW PAGE

2/23-3/6/94 Seminole Bromeliad Society will participate in the Seminole County Fair with a display in conjunction with the Palm Society and will also sell plants from 5 to 9 p.m. daily.

3/17-30/94 Florida East Coast Bromeliad Society will participate in "Everybody's Flower Show" at the Ocean Center, Daytona Beach.

4/16-17/94 Sarasota Bromeliad Society 14th Annual Show. This is their first Spring show. Standard show and plant sales at Selby Botanical Gardens; 811 Palm Ave.; Sarasota. A special sale, for bromeliad society members only, will be held by Harry Luther from 2:00 to 4:00 P.M. Saturday. This will be a special clearance of surplus bromeliads from Selby Gardens. Party and plant auction on Saturday night. Jack Dellorta, Show Chairman, (813) 925-7566.

5/6-8/94 Bromeliad Society of Central Florida annual Mother's Day standard show and sale at Florida Mall, Orlando. Bud Martin, Show Chairman (407) 321-0838.

6/15-19/94 11th WORLD BROMELIAD CONFERENCE "Bromeliads in Paradise"; San Diego, Ca. Hanalei Hotel (for reservations 1-800-882-0858). Conference reservation price to 4/1/94, $125.00. Mail to Joyce Brehm; 5080 Dawne St.; San Diego, Ca. 92117. Time to begin thinking about plants to enter in the show and special plants for the rare plant auction.

September 10, 1994 - FCBS ANNUAL ONE DAY EXTRAVAGANZA. Hosted this year by Florida West Coast Bromeliad Society and to be held at Las Fontanas resort in Clearwater. Much more on this as the season progresses.

WANTED TO PURCHASE: Up to 10 plants each of the original clones of Neoregelia Avalon and Neoregelia Oh!No!. Drop me a line at the cover address. Carol Johnson.