



FLORIDA COUNCIL
of
BROMELIAD SOCIETIES inc.
Newsletter

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CATCHING UP - STAYING EVEN
Editor

BSI BALLOTS. Any BSI member in Florida who received the last issue of the JOURNAL without a ballot for election of BSI director from Florida, please contact the Editor, Mr. Thomas U. Lineham, Jr.; 1508 Lake Shore Dr.; Orlando, Fl. 32803 and he will send you one. Journal mailers finished with quite a few extra ballots. Since there is no contest in the election anywhere except Florida and Louisiana, Mr. Lineham is concerned that all members in those states receive ballots. The new BSI By-Laws require that the ballots be mailed in an official envelop with the signature of the voter on the back, so a specially mailed ballot will pose no threat to the validity of this election.

MOORE, ROBERT L. Members of Florida West Coast Bromeliad Society and his many friends were devastated by the sudden illness and death of FWC President, Mr. Bob Moore, who passed away on May 2. He had lived in St. Petersburg since 1975 and was also a member of the St. Petersburg Garden Club and the Pinellas Branch of the American Begonia Society. He was a student judge in the Bromeliad judging school which convenes periodically in Ft. Myers and had attended the last session on April 22nd, just 10 days prior to his death. Our condolences to his wife and family. Vice President James Boynton will assume the Presidency of FWC and Michael LeVasseur will become Vice President and combine those duties with his present job of society Treasurer.

DONATIONS. Our Florida people have been coming through with much needed (and appreciated) donations to Florida Council's lean and mean treasury. The latest donation was from the Calcoosahatchee Bromeliad Society, which held a plant sale at the local flower show, got out and worked hard, and then gave the net proceeds (\$235.75) to our Council. That amount just about pays for one entire issue of the Newsletter. We also wish to thank Mrs. Frances Sanjurjo of Bromeliad Society of South Florida for a personal cash donation to FCBS.

FELLOWSHIP. Any of you folks who can possibly do so, make a point of attending the shows &/or plant sales and demonstrations being held throughout the state. After several years of rather dwindling interest, suddenly the plants are back. The public is showing renewed interest in bromeliads. In addition to the beautiful plants, there are some very nice people to socialize with. We have just returned from the Miami show and I was as impressed by the people and the hospitality as with the lovely plants (537 entries). This is the same society which hosted the 1988 World Conference and one would expect a considerable let-down this year, but not so. There are many shows coming up. Enter plants if you can, or just attend, introduce yourself if need be and have a good time talking bromeliads with your fellow plant "nuts".

CONSERVATION COMMITTEE REVIEW: Printed elsewhere in this issue is a portion of a report received from Mr. Mark Dimmitt, Chairman of the BSI Conservation Committee. Please read it carefully. Mention is also made of this matter in the FCBS minutes (please note). SITES referred to is an international agreement which places certain plant families on endangered species lists and forbids or drastically reduces collection &/or commerce of those items. Florida Council is interested in your observations on this subject.

Editor: The Kew Magazine

Dear Editor:

The Conservation Committee of the Bromeliad Society, Inc. offers the following response to Mike Read's article entitled "Bromeliads Threatened By Trade", which appeared in the Kew Magazine, volume 6, Part 1 (February 1989).

The Conservation Committee of the Bromeliad Society, Inc. disagrees with Mr. Read's opinion (vol. 6, part 1) that most tillandsias are endangered and with his recommendation that the whole of the bromeliad family be listed under CITES. Our preliminary research has led us to different tentative conclusions:

1. Most of the bromeliads in large-scale commercial trade are extremely abundant species and are in no immediate danger from collecting.
2. There is virtually no information on the true status of most species which are reportedly rare.
3. The import figures used as the primary basis for the listing proposal are of little value because they are not itemized by taxon. Even if they were detailed, they would still be worthless without data on wild population sizes against which to compare the imports. Much more research is needed here.
4. There is more artificial propagation of bromeliads taking place than most conservationists are aware of. There is already a substantial movement away from wild plants in the trade.
5. Listing of entire families of plants under CITES is a very poor strategy which causes far more harm than good. CITES status greatly hinders both research and conservation efforts in developing countries (where virtually all bromeliads occur). Identifying and listing individual endangered taxa will be much more effective.

DOCUMENTATION

Two years ago, the Conservation Committee began a project to assess the status of bromeliads throughout their natural range. We wrote to about 125 people who are involved with Bromeliaceae, a mixture of ecologists/botanists, professional nursery people, and knowledgeable amateur collectors. We received about 10 substantive responses. This response is based on these experts, our own first-hand field experience, a literature search on Bromeliaceae, and a considerable volume of literature on the state of tropical habitats in general.

Most bromeliads which are imported from wild sources are the epiphytic, xerophytic species of Tillandsias and a few other genera of similar habit. (We use the general term "tillandsia" and "tillandsioid" to include all bromeliads of a similar habit, regardless of genus). The great majority of tillandsias imported to the U.S. come from Guatemala and Mexico. The same is probably true of European and Japanese imports, because most of the species in the trade are native to those countries; in addition, we are aware of no major exporters in most other countries. Although there are over 200 taxa available in the commercial trade, nearly all of the volume is comprised of fewer than a dozen taxa (T. ionantha, brachycaulos, tricolor, caput-medusae, butzii, bulbosa, stricta, streptophylla). Of these, most are abundant and widespread species.

The import figures for bromeliads may seem alarming at first glance, but such information by itself is of little value for three reasons. First, the figures usually identify only family or genus; one has no way of knowing whether they are common or rare taxa. Second, import figures are meaningless unless compared to the population sizes in the collecting localities; see the discussion on this point below. Third, the reports don't say whether the plants were from wild or cultivated sources; this point is also discussed below.

ABUNDANCE OF BROMELIAD SPECIES IN NATURE

A literature search which turned up 70 articles on Tillandsia yielded no quantitative data on the population sizes of any bromeliad species. (Two papers, though, described T. aeranthos as growing so abundantly that they are killing trees in Argentina.) However, a very large number of observations by numerous field workers supports the following conclusion: Most tillandsias are extremely abundant within their geographic ranges. They cannot be compared to cacti or orchids, as they often are. In a typical tropical tree, for example, tillandsias outnumber orchids by 10 to 100 times.

In 1982 Mark Dimmitt (unpublished data) measured a two-by-three kilometer patch of T. purpurea growing in the Peruvian coastal desert. This one population contained an estimated 300 million plants. Dozens of populations of similar extent occur along the Pan-American Highway.

To put this in perspective, the United States imports about 3 million bromeliads per year from all sources, wild and cultivated (IUCN, 1988). If all these plants came from the same patch of T. purpurea, it would amount to an inconsequential 1% of this single population. Furthermore, nearly one-half of these imported plants are from a single, cultivated source, the Netherlands. The remaining 1.5 million plants, taken from several common species, is not likely to have more than a temporary and very local impact. Bromeliads seem to be more popular in Europe than in the U.S.; but even if European imports are ten times higher, it would not significantly change the overall picture. Most tillandsias seed prolifically, and even if local populations were depleted, they probably recover in a few years.

There is little evidence to suggest that the less common species are being collected in deleterious numbers. These are rarely offered in wholesale lots, but are mostly restricted to the much smaller, retail trade among collectors.

Lastly, some purportedly rare species are not; they simply occur in remote, seldom visited localities. Examples are T. chiapensis (which is commonly believed to be restricted to a single canyon) and T. ionantha var. van hyningii. Several very large but unpublicized populations of these species have been found (Alfred Lau, Jr., pers. comm.). Much more field work is needed to document the distribution and abundance of bromeliad species, most of which are poorly known.

For these reasons, we respectfully register our difference in professional opinion with Professor Werner Rauh, who is one of a very few who feel that bromeliads are generally threatened by collection.

ARTIFICIAL PROPAGATION OF BROMELIADS

Few conservationists seem to be aware of the magnitude of nursery propagation of bromeliads. This leads to the erroneous assumption that most imported bromeliads are wild-collected. Tropimaya and Bromeliifolia, the two major exporters in Guatemala, have several acres of growing grounds, and both are working to become, in time, independent of wild-collected plants for their commercial sales. At this time, over half the exports of Tropimaya are from propagated stock (Ann Harris, pers. comm.).

Bak's nursery in the Netherlands is probably the world's largest producer of bromeliads, and it is astonishing. There are dozens of greenhouses devoted to bromeliads. Even though tillandsias comprise a minor part of their operation, they have millions of tillandsia seedlings grown from their own stock plants. This operation employs 9 people who do nothing but pollinate flowers and sow seeds. DeMeyer in Belgium is also a huge nursery which is heavily engaged in seed propagation of tillandsias.

Mr. Read's statement that tillandsias are slow and difficult is also erroneous. They are extremely easy to propagate, needing no more substrate than plastic screen, and have virtually no pests or diseases. Nor are they slow, if cultivated under ideal conditions. The more vigorous tillandsias grow from seed to flower in as little as 3-1/2 years (T. stricta) to five years (T. flexuosa, caput-medusae, brachycaulos, streptophylla, bulbosa, ionantha, gardneri, meridionalis, etc.) (Dimmitt, in manuscript).

Vegetative propagation is also a commercially viable method of increase. Under high light and frequent fertilization, most species can be induced to produce 5 offsets per year, and these offsets mature in one year. A single plant can thus yield 3225 5 years.

LOGO CONTEST

Congratulations to John Worley of the Sarasota Bromeliad Society, and many thanks for supplying us with a most attractive new logo. John has received his \$100.00 prize money, and has donated it to the Sarasota Bromeliad Society. His entry won by one vote over that of James Stoll, who submitted his entry five years ago, saying at that time that we needed a more representative logo.

Many thanks to the following who also submitted excellent entries: Betty Ann Prevatt, Dottie Meyer, Ed Sargent, Kiti Wenzel, Elizabeth Kottka and George Schrader. One entry was received after the balloting. First & second place are shown below. I will share the rest of the entries with you as time goes by. The next issue will be the annual roster issue and will feature a newly designed cover using the new logo. We received a total of 13 entries.

THE WINNER:



RUNNER-UP:



ARITHMETIC LESSON

Or

Additions thru Multiplication, Subtraction & Division (No Square Root)

Last issue we had a geography lesson. This time an arithmetic lesson.

One of the first things a new bromeliad fancier learns is that most generally, the plants will bloom only once, produce offsets in some fashion, then die. Some growers never progress beyond the taking and growing on of these pups to perpetuate the collection.

There are other ways of increasing production, which see:
Multiplication: Offsets (pups) belong in this category and are usually produced at the base of the plant. They should not be taken off until large enough to fend for themselves, but it is usually true that the more pups are taken, the more will be produced. My first *Aechmea chantini* cv. 'Samurai' produced 8 offsets thru systematic excision of each one as soon as it was big enough to plant. Some bromeliads, notably certain *Vrieseas* and *Guzmanias*, produce new plants from the center of the parent plant and removing them can prove to be a traumatic experience. Example: *Vriesea glutinosa*, *Guzmania sanguinea*. If you are a new grower or have only one plant, perhaps you should be content with only one for one and just cut away the old leaves as they become unsightly. Offsets are supposedly all true reproductions of the parent plant. Often a plant grown from seed will not show it's true character until it is grown from its first crop of offsets.

If you are young enough and patient enough, growing bromeliads from seed is a fascinating multiplication process. Some seeds, such as those from *Aechmea mertensii*, can be grown into blooming size plants within a year. But some take a very long time. *Vriesea heliconioides* seed, planted 5/24/81, have just begun to produce blooms. The third form of multiplication is tissue culture, which is a scientific process of producing thousands of plants from a small portion of the meristem of a bromeliad. I mention it only because of its importance in the commercial production of bromeliads. You and I cannot accomplish this process under ordinary growing conditions.

Some bromeliads, notably *Tillandsias*, produce no offsets and can only be reproduced via the seedling method (or tissue culture).

SUBTRACTION: It is possible to take away and yet get more plants, and this is done by reversing the process of taking offsets. Instead, with a cluster of pups at the base of the plant, just cut away the spent and unsightly parent plant. Leave this cluster of plants to grow on together either in the original pot or a new, larger one. The result is usually smaller plants, but better color and conformation. Examples: *Neoregelia fireball*, *N. ampullacea*, *N. compacta*, *Vriesea carinata*, *V. lubbersii*, *V. flammea*, and many *Billbergias*.

DIVISION: When plants become too thick in a pot, or on a tree limb, then we eventually must divide them. Sometimes the root ball is so thick it will break the pot or the pot must be cut away from the clump of plants. When root-bound the plants tend to become progressively smaller and weaker.

Some bromeliads can be divided, cut into pieces and new plants grown from the pieces. *Cryptanthus cascade*, for example, tends to become ugly after blooming, with the long stolons hanging over and

