

Journal of The Bromeliad Society



VOLUME 52



November-December 2002



NUMBER 6

Journal of the Bromeliad Society

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ISSN 0090-8738

Vol. 52, No. 6

November-December, 2002

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Cover photographs. Front: Holiday colors abound in this beautiful *Bromelia macedoi* L.B. Sm., a species from Goias State, Brazil in cultivation at the Marie Selby Botanical Gardens. Photograph by Bruce Holst. **Back:** More holiday colors are found on *Guzmania globosa* L.B. Sm. The slimy layer on the inflorescence may help protect it from plant-eating animals and from dessication.

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The Journal is published bimonthly by the Bromeliad Society International. Articles and photographs are earnestly solicited. Please send text (preferably on disk or via e-mail attachment) and figures to editors. Closing date is 60 days before month of issue. Advertising rates are listed in the advertising section. Permission is granted to reprint articles in the Journal, in whole or in part, when credit is given to the author and to the Bromeliad Society International. Please address all correspondence about articles and editing to the editors.

Subscription price (in U.S. \$) is included in the 12-month membership dues.

Single: \$30 — Family: \$35 — Fellowship: \$45 — Life (USA): \$850 — Life (other): \$1056

First class mail (USA): \$10 — International surface mail: \$8 — International air mail: \$18

Please address all membership and subscription correspondence to Membership Secretary, Carolyn Schoenou

Back Issues: Single copies (USA, First Class Mail): \$4.50; (International, Airmail): \$5.50. Volume, 1 year, 6 issues (USA, Printed Matter rate): \$20; (International, Surface Mail): \$25. Order back issues from BSI Publications, 2265 W 239th St., Torrance CA 90501 USA. E-mail: publications@bsi.org. Make checks or money orders payable to BSI in U.S. Dollars. Prices are subject to change.

Printed by Fidelity Press, Orlando, Florida.

A Note From Your New Editors

With this issue, we are pleased to begin the job of editing the BSI journal, and hope to continue the fine work of those before us. A big thanks goes to Chet Blackburn for the past six years of work on the journal. He has been generous of time and advice on the production of the journal, and we wish him well in his "retirement." Since this issue (November-December 2002) will be printed in 2003, we have decided not to include any new species descriptions. Doing so causes problems in the scientific literature citations. As a result, the next few issues may have more than the usual number of scientific descriptions, and this issue will be more business oriented with BSI activities and notices. We hope to catch up to the regular schedule within several issues, and include an even blend of scientific and horticultural articles, with a good dose of expedition reports, BSI news, conservation news, etc.

We will be incorporating a few minor design changes into the journal to increase its readability and hopefully improve its look. We are also working on preparing author guidelines which will be posted on the BSI website as soon as possible.

The journal is arguably the most important component of the BSI, and needs the support of all of its members to make it useful, informative, timely, and a vehicle to attract new members. Please do not hesitate to write us with your advice, constructive criticism, and suggestions, but especially write us with your manuscripts, photos, calendar items, and anything else related to bromeliads and their habitats.

Please send your manuscripts and other correspondence to:

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Bruce K. Holst & Susan A. Murphy

p.s. Newsletter editors, we would greatly appreciate receiving copies of your newsletter, which can be used for calendar items and other news or stories of interest to the BSI readership. Please send to the above address. Thank you.

p.p.s. Please support our advertisers!

Hannibal, Norman, and Tunisia

Chester Skotak

Reading the national bestseller, “The Orchid Thief,” by Susan Orlean, I noted yet another tall story that was told about the origin of *Neoregelia* “Fireball”. This little neoregelia might be one of the most found plants in the bromeliad world. Which brings me to my story. I want to be first in the line of storytellers to claim *Neoregelia carcharodon* ‘Tiger.’ Hopefully my story will be followed by other stories leaving ‘Tiger’ to yet another dubious origin.

Someone at the conference in St. Petersburg had remarked to me that *Neoregelia carcharodon* ‘Tiger’ was not a *carcharodon* at all. This was not an earth shattering statement to me.

After seeing Ed and Moyna Prince’s perfectly grown ‘Tiger’ in the marvelous display put up by the Bromeliad Society of South Florida, my memories started racing back to the day this plant was “discovered.”

I have to add here that I always wonder about new plant discoveries since the plants had always been there, somewhere, only waiting for someone with a pedagogic mind ready to collect, dry, dissect, compare and categorize said plant, only later to report that such new discoveries were now extinct or in over abundance, similar but different, and only more research and grants could tell the tale. So I now refer to this new discovery and hope it doesn’t get kicked around too much.



Moyna Prince

Figure 1. *Neoregelia carcharodon* ‘Tiger’



Moyna Prince

Figure 2. *Neoregelia carcharodon* ‘Tiger’

Not so long ago, I was travelling north of the city of Niteroi, in Rio de Janeiro state, looking for new bromeliads. I was travelling with my good friend and well-known botanist, Pedro Nahoum. On this particular day we stopped to visit a dilapidated orchid nursery located off the main road. The old wooden slat houses were leaning to one side, not by design but because of their age and direction of the predominant wind. Browsing through so many new orchids was dizzying when suddenly two plants really caught my eye, not orchids at all. It was a pair of wonderfully banded, somewhat large neoregelias under the bench mixed in with the weeds and orchids. I nearly tripped over myself falling forward and smashing some orchids. I remember thinking to myself that it was my good fortune that they were only orchids popping and crunching under my feet and not those wonderful undescribed neoregelias.

The neoregelias under the benches looked back at me like two large basketballs painted to look like tigers; the plants were heavily banded and mahogany in color. They had been found in nature this way. Plants made by the hybridizer of all hybridizers.

We asked the owner of the orchid nursery where he got these two neoregelias. After a lot of foot dragging, looking up towards the heavens and muttering and pretending to be deaf, we realized this was getting us nowhere. Somehow, call it divine intervention if you must, the orchid owner decided to go that day and see if there were more plants to be found. We were not invited for the hunt. Returning to the orchid nursery the following day, the owner reported to us that, sadly, he had only found one more plant. He pointed towards the hills behind his nursery and waving his hand from left to right said, “The plant is from there.” This area he was pointing to must have been a full one half of South

America. As always when one is travelling, the reasons "not to" were many more than the reasons "to;" it would be a long walk, there was no time, and anyway with two neoregelias you can make thousands of seedlings and now we had three. So I left that area hesitating and looking west towards the hills over my shoulder. I kept wondering what other treasures were out there for the finding.

On my return to Costa Rica, work began on crossing *Neoregelia punctatissima* x *Neo. carcharodon* 'Tiger' to produce *Neo. 'Hannibal Lector.'* Look for *Neo. 'Norman Bates,'* a cross of *Neo. 'Hannibal Lector'* x *Neo. carcharodon* 'Tiger' - very heavily banded with short wide leaves. Last of all (at least for now) is *Neo. 'Tunisia,'* a cross of *Neoregelia 'Hannibal Lector'* x *N. punctatissima*. All of these are very heavily banded neoregelias

The potential for new, banded neoregelias looks promising, thanks to 'Tiger.' There are many talented hybridizers currently working on this group of neoregelias. Who knows what these creative people will come up with in the future?

Oh, I forgot to mention, how did my conversation end with that fellow that informed me that 'Tiger' was not a *carcharodon*? At first I thought I should read him his Carmen Miranda Rights (Brazilian Law) but I calmed down. Sure, I have my doubts about this being a *carcharodon*, but at least 'Tiger' has a point of reference, and I told him if 'Tiger' is described one day, then at least there is a story to go with it, and whether it is dubious to you or not, that's how it was...

Article kindly furnished by Chester Skotak and forwarded to the Journal by Moyna Prince along with her photographs. Originally printed in the newsletter of the Bromeliad Society of South Florida.

Welcome New Members

The following individuals joined the Bromeliad Society International in 2001 and 2002. Thank you for supporting the BSI! Special thanks to new Life Members: Francisco Oliva-Esteve, (Venezuela), Paul F. Schulze (Maryland), Zlatko Janeba (Utah), and Hiroyuki Takizawa (Japan).

José Abalo
John Adams
José Alicea
Laurel Allen
José Alvarez
Carlos & Lucia Amaral
Tomy Arackal
Christopher Atlee
Donald Auerbach
Virginia Azevedo
Janette Baker
John & Rosemary Banas
Gerry Barko
Christoph Barnhill
Barret Bassick

Parris Beamer
Martin Beckerman
Robert Bennett
Joan Berryman
James Bixler
John Blackley
Aubrey Blalock Jr
Virginia Bodden
H Boyce
Dallas Bradford
Manfred Broetzmann
John Brown Iii
Breck Campbell
Mary Campbell
Bryon Carpenter

Ray Chandler
David Clark
Jaime Combadao
Ann Cooper &
Robert Cooper Jr
Wesley Cowley
Luiz & Maria Cunha
James Cunningham
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Ester Maria De Sant'anna
Felipe De Sola
George De Souza
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B Demers & Gary Remy
Arthur Dizon
Stephen Duckworth
John Egglshaw
Adam Elliott
Carol Esser
David Fay
Phillip Fenner
Janis Fielder
Wallace Fox
Peace Gaddis Iii
Sharon Garcia
Tom Gawronski
Rose Gay
Laurie Goldstein &
Shirley Kimsey
Leticia Gomez
Dulce Gorraez
Thomas Grimston
Marek Grubski
E Grubstein
Brian Hacker
Cicely Hall
Glenda & Ron Hall
Richard Harper
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Barbara & Jeffrey Heins
Peter Hopper
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Kurt Juelich
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Brian & Mary Keane
Charles Keenan
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Paul Knight
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Helen Kwiat
Kwang Kwon
Bridget Lai
Pamela Lang
Robert Larnach
Robert Larnach
Barbra Larson

Herve Le Page
Don Lee
Lim Li
Denise Lloyd &
Wesley Ward
Charlotte & Fred Lohrer
Henry Loomis
Janet Lopez-Unger
Janice Lucas
Chris Lutz
David Mahler
Dorothy Mahler
Robin Makowski
Homer Mann
Santiago Marin
Benjamin Marks
Bradley Martin
Shigeko Matsuse
Kathryn & William Mayer
Mary Mc Kinzie
Frank Miller
Cynthia Minyard
Leonard Missavage
Mt Coot-Tha Botanical
Garden Library
Al Muzzell
Gyula Nemeth
Shirley Nicodem
Miguel Nicolas
Rudy Nieto
David Nirschi
Christopher Nocera &
Niall O'donnell
Gerald Okeefe
Leigh Osborn
Silvia Palmieri
Ulrich Pampel
Paul & Siew Parker
Grant Parmalee
Barbara Partagas
Phoenix Gardens
Traian Popivanov
Dan Porsi & Lee Straight
Linda & Paul Quinn
Kenneth Quinn
Michael Raiman
Gordon Reingruber
Leah Ridge & Alan
Buffenstein
Gabrielle Rini
Alan Rogers
Marsha Romines-Marion
Kiattiporn Rujichit
Roland Schemers Jr
Rowland Schneider

Bonnie Schneider
Antoinette Schucker
Larry Sears Sr
Hachiro & Susan Shimanuki
Akira Shimazaki
John Shultz
Donna & Howard Simmons
Richard Singer
Beverly & Harold Sisco
Fred Snyder
Southwest Bromeliad Guild
Penny Sparks
Stuart Stearns
Bob Steel
Phyllis Steil
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Mary Whittemore
Gordon & Linda Wilde
Mark Wilkinson
Darlene & Scott Williams
Bryan & Jo Ann Windham
Dawn Wokson
Diane & Donald Worthen
Babe Wright &
Ralph Mc Wherter
Mike Yamamoto
Garrett Yull

Bromeliads in the Landscape



Bruce Holst

Figure 3. A heron in search of lunch strolls past a bed of salt spray tolerant *Neoregelia cruenta* along the bayshore at Selby Botanical Gardens, Florida.



Bruce Holst

Figure 4. *Lindmania thyrsoides* in habitat (Cerro Yutajé, southern Venezuela). Though including species of great beauty, no members of this genus of 40 species are known in cultivation.

Meeting Announcement

Monocots III, April 1-5, 2003, Ontario, California

This is the Third International Conference on the Comparative Biology of the Monocotyledons, and Fourth International Symposium on Grass Systematics and Evolution. Of note are the five presentations on the Bromeliaceae that will occur in two sessions on April 1. The two sessions run from 10:30-12:00 a.m., and 1:30-3:00 p.m.

The five speakers who will largely discuss the systematics and taxonomy of the Bromeliaceae based on DNA data include: **Michael Barfuss** (University of Vienna, Austria), Tom Givnish (University of Wisconsin - Madison), **Kate Maxwell** (University of Cambridge, UK), **Simon Pierce** (Department of Animal and Plant Sciences, Sheffield, UK), and **Georg Zizka** (Senckenberg Center for Biodiversity Research, Frankfurt, Germany).

For more information, see: <http://www.monocots3.org/>, or, contact the coordinator of the Bromeliaceae sessions: Jason R. Grant, jason.grant@unine.ch.

Events Calendar

2003, March 7-10. *BROMELIADS 2003 AUCKLAND*. Waipuna Hotel and Conference Centre, Waipuna Road, Mt. Wellington, Auckland, New Zealand. For Conference bookings contact Bev. Ching (+64-9-5764595, fax +64-9-5764595, or e-mail: nzbromconf@hotmail.com).

2003, March 22-23. *BROMELIAD SALE*. Bromeliad Society of Central Florida. Leu Gardens, 1920 N. Forest Ave., Orlando, Florida, USA. 9-5.

2003, April 11-13. *BROMELIADS ON THE NET – 23RD ANNUAL SHOW AND SALE*. Sarasota Bromeliad Society. Marie Selby Botanical Gardens, Sarasota, Florida, USA. 10-4. For more information, contact Inez Dolatowski (941-748-2120; ldolatow@tampabay.rr.com) or Rob Branch (941-358-4953).

2003, April 12, 13. *BROMELIAD SOCIETY OF BROWARD COUNTY -- SHOW AND SALE*. Also, Florida Council of Bromeliad Societies Meeting on the 12th. International Fishing Hall of Fame, Dania Beach, Florida, USA. For more information, contact Ann Schandelmayer (954-583-1124).

2003, April 12, 13. *SPRING ARBORETUM SALE*. Bromeliad Society of Houston. Houston Arboretum and Nature Center, 4501 Woodway, Houston, Texas, USA. Sale hours, Sat. 9-5, Sun 11-4. For more information, contact Allyn Perlman (713-772-7831 or deliboy@ev1.net).

2004, July 26 to August 2. *WORLD BROMELIAD CONFERENCE*. Bromeliad Society International/Bromeliad Society of Greater Chicago. Rosemont, Illinois, USA. For more information, visit www.bsi.org/events.

Highlights of the 2002 BSI Board of Directors Meeting

Following is a summary of items discussed or action taken at the Bromeliad Society International Board of Directors' meeting held at the Hilton Hotel, St. Petersburg, Florida on May 14, 2002.

The meeting was called to order by the President Tom Wolfe at 8:03 a.m. The President noted that there were no visitors present at the time. The following board members were in attendance:

Oscar Allen - California	Rusty Luthe - Secretary
John Atlee - Western	Ken Marks - Florida
Chet Blackburn - Editor	Moyna Prince - Florida
Joyce Brehm - California	Jack Reilly - First Vice President
Dennis Cathcart - Florida	Fred Ross - Louisiana
Ed Doherty - Texas	Carolyn Schoenau - Membership Secretary
Luiz Felipe Carvalho - Brazil	Bill Soerries - Southern
Bill Frazel - Florida	Hattie Lou Smith - Vice President
Gary Gallick - Texas	Hiroyuki Takizawa - Japan
Don Garrison - Treasurer	Peter Waters - New Zealand
Keith Golinski - Australia	Tom Wolfe - President
Martha Goode - Central	

Unable to attend: Dan Kinnard - California, Stewart Strutin - Northeast.

ITEMS DISCUSSED - ACTIONS TAKEN

1. There were four votes that came before the Board since the last meeting. All motions were passed. They were:
 - To create the office of Second Vice President to be in charge of the World Bromeliad Conference and to work along side the First Vice President and the World Conference Committee. The bylaws changes to Article IV 1, 2, and 4(a) were also discussed.
 - Approval for funding the purchase of a fireproof storage cabinet. The cabinet will house BSI documents at the BSI World Headquarters, Marie Selby Botanical Gardens in Sarasota, Florida.
 - The approval of the Boca Raton Bromeliad Society to become an affiliate of the BSI.
 - The election of Dennis Cathcart as recipient of the Wally Berg Award of Excellence.
2. Carolyn Schoenau noted that there is still a decrease in membership from 2001 to 2002 by 3%; this is still higher than 1997 figures, however. A

discussion followed about the use of online member registration and how to keep members. The cost of international membership was discussed and how that discourages new/renewal memberships.

3. There are two new life members - one from Utah and another from Venezuela.
4. The member roster, with the help of Webmaster Ken Marks, is online and is password protected. In order to control access, a motion was passed to create individual passwords for the BSI online membership roster, under control of the Membership Secretary.
5. The President brought up a proposal made by Nat DeLeon regarding raising the current rate of \$60 for a commercial membership. As an example, with an increase to approximately \$200 per year, a commercial member would receive two Journals plus their name and address listed in the Journal under a commercial members heading with perhaps a brief description of business. A motion was passed to let Nat DeLeon explore this idea.
6. Dennis Cathcart suggested renting other mailing lists of such organizations as the Orchid Society and the Succulent Society for direct soliciting of BSI memberships. A motion was passed for Mr. Cathcart to look into the renting of the mailing list of the Orchid Society for certain target areas and send them an invitation to join the BSI.
7. Chet Blackburn pointed out that advertising income is down. Distribution of surplus Journals was also discussed. Chet recommended that the new editor start with the September/October issue. A FAX machine is to be left with the old editor and the Publications Chair has requested the use of the binding machine. The new editor will purchase new equipment for use.
8. Gene Schmidt, the Affiliated Societies Chair, proposed that the BSI join other affiliate/international societies to receive their monthly newsletters for the purpose of updating the BSI website and Journal affiliate information. A motion was passed to give Mr. Schmidt \$200 a year to join affiliates in his name acting as chairperson.
9. K. Golinski raised the issues regarding the problems of getting growers to register their cultivars and the need for an accurate database of cultivars. The ease of electronic registration needs to be advertised to encourage growers to do so. The idea of discouraging the showing and awarding of unregistered hybrids, as mentioned in the Judges Handbook, was discussed as well. It was noted that we should all act as ambassadors within our own districts and encourage registration. No immediate solution was found, although a motion was passed to send a copy of the CD of the last two years of the cultivar registry photographs to George Allaria for copying onto CDR for sale in publications.

10. A motion was passed to reimburse Derek Butcher, the Cultivar Registrar, for the cost of shipping the original CDR and hard copies of the Cultivar Registry to the BSI world headquarters at Selby Botanical Gardens for storage in the fireproof safe. This shall be done on an annual basis. The Board communicated to Mr. Butcher their desire that he reference the BSI website first and the FCBS website second in his communications.
11. John Duos submitted a treasurer's report to the Secretary stating the satisfactory audit of the BSI.
12. The progress of the update of the Judge's Handbook was discussed as to how it should proceed and be distributed as a handbook and through the website. Some expressed concern over the long time frame for the release of the update.
13. Harry Luther reported that the administrative expenses for the M.B. Foster Bromeliad Identification Center are increasing (+\$10-12K) due to hiring another assistant to help with his work at Selby Botanical Gardens. Harry gave a brief explanation of how his funding is derived and the role the BSI plays in the funding. He further illustrated the impact the BSI and BIC is having on education and research. Several thanks were extended to Mr. Luther for his dedicated work at the BIC.
14. The subject of the sale of donated used books and Journals was discussed ranging from direct sale to auction. The idea of Journals being sent to affiliate societies was also considered. A motion to make available on the BSI website for auction any used books donated to the BSI was retracted.
15. There was continued discussion regarding ways to pool and distribute donated materials to affiliated societies and/or individuals. A motion was passed to form a committee to devise a system for the equitable distribution of donated publications to the BSI. It was decided that Dennis Cathcart and George Allaria would comprise the committee and that they will report back at the next Board meeting.
16. Ken Marks read a report by Christopher Krummrey regarding the Slide Library. It stated that nine programs were loaned out over the course of the past year, with expenses incurred for shipping of the programs. There are currently 12 programs available for loan. He recommended that the budget stay at the current level. Chet Blackburn still has not received the two bad programs reported last year for possible Journal use.
17. Ken Marks reported that there were 273,000 web hits on the BSI website resulting 718,000 different page views for about 134,000 users on the site. There were approximately 2,000 pages viewed by about 370 users per day. He outlined the popular sites and various registration statistics.
18. Gene McKenzie has resigned from the History and Archives post. Her replacement will be the first duty of the new Nominations chair.

19. Bill Soerries presented the Nomination Committee's slate to the Board. He noted that there is a need for two nominations for one Director from California and five nominations for two Directors from Florida. There were two candidates for the Editorship of the BSI Journal. As this is Mr. Soerries' last meeting, the President will make a new appointment for Nominations Committee Chair.
20. A motion was passed to set aside the election of the new Editor of the Journal to allow the candidates to be interviewed by the Board.
21. The recommendations made by President Tom Wolfe regarding the job descriptions of First and Second Vice President positions in the proposed Bylaws were discussed as were other portions of the Bylaws as they would apply to the World Conference. An updated Bylaws will be made available on the BSI web site.
22. It was decided that those currently involved in the World Conference need to have an opportunity for input regarding changes, as they are the people with the most direct experience with organizing the Conference. As these are standing rules they are dynamic and therefore can change easily with a Board vote. A motion was passed to accept the 2nd Vice Presidents' job description as it has been reworded, for incorporation into the BSI Bylaws under Standing Rule 3.
23. Clarification was given as to what is meant by a Conference Handbook. It is an attempt to pass on the accumulated knowledge of each World Conference organizing experience to make the successive conferences easier and smoother to organize. This handbook should be a loose-leaf notebook to allow for easy changes. It was felt that the handbook should start in earnest after the Chicago World Conference in 2004.
24. Louis Felipe de Carvalho gave a presentation on the progress made over the past year of the CIMA. They have purchased lands for preservation, started construction of apartments to allow researchers extended stays and they have started installing trails for an in habitat educational experience. He spoke of the continuing research into and efforts to protect the northeast region of Brazil. The President asks if there is any way that the BSI can help in these endeavors. The answer is the promotion of the CIMA project and the importance of these preservation efforts. The topic of Brazil becoming an affiliate society and the steps needed to make that happen was brought up.
25. Jack Reilly reports that the Westin O'Hare in Rosemont, Illinois has been contracted as the location for the 2004 World Conference. He asked for input on what sort of tours people would like e.g. botanical gardens, parks etc. He showed the winning design to be used for the Conference pin, poster and logo. Ken Marks detailed how surveys and other information regarding the Conference can be posted on the BSI website.

26. Tom Wolfe briefly showed a mockup of the new BSI Cultural Manual. Joyce Brehm spoke of her progress on the manual and asked the Board for approval to change format, photos, and content. This would then make it a new publication as opposed to a rewrite as was the original intention. It was suggested that the Board be kept apprised of the content progress and that a pilot booklet be presented at next year's Board meeting. A motion was passed to give permission to J. Brehm to proceed with rewrite of BSI Cultural Manual and maintain a \$500 budget.
27. Carolyn Schoenau reports that the contest period 2001-2002 brought an increase of membership by 103. Florida won the contest with 44 new members. A drawing of two names of these new members at the Conference banquet determined the winners of the first prize (Baensch) and second prize (Padilla).
28. Bruce Holst was elected the new Editor of the Journal. It should be noted that Mr. Holst and his wife, Susan Murphy, will share the Editorship.
29. After a brief introduction by Moyna Prince regarding the desperate situation the weevil is causing most of Florida's native species, Barbara Larson of the University of Florida gave a presentation on *Metamasius callizona*. Ms. Larson covered the history, movement, and areas under attack by the weevil. Very graphic slides were shown of the effects of this insect on the native populations. She spoke of the various attempts at management of the problem using classical biological control. There is one promising fly that attacks the weevil that has been found and is in testing now. Other projects such as the FCBS seed project are helping in the preservation of native bromeliads. The major problem is funding. She encourages people to visit the website for further information.
30. A motion to donate \$3000 from the BSI Research fund to the "Evil Weevil" fund was passed. The recipient of these funds must contribute at least one research update article to the BSI journal.
31. A motion that the money going to the "Evil Weevil" fund shall be earmarked for direct support of the project graduate student was passed.
32. Dennis Cathcart spoke of the narrow profit margin for most published materials. Discussion continued about what the policy is regarding sales of books at the WBC; no action was taken.
33. Carolyn Schoenau has been charging postage for international shipping of the Journal to international members, though it is less than the actual cost. She will refund what was collected. A motion was passed to leave Life membership at \$800 for International members and to include the Journal without postage fee.
34. Tom Wolfe presented a proposal to establish a Bromeliad Society International World Headquarters at the Marie Selby Botanical Gardens in

Sarasota, Florida. Now is a good time as Selby Gardens is starting out on a large expansion campaign. Mr. Wolfe has sent a letter to the Selby Board of Directors expressing the intent of the BSI to establish a world headquarters at Selby Botanical Gardens. A motion to create a fund to establish a Bromeliad Society International World Headquarters at the Selby Botanical Gardens in Sarasota Florida was passed. The fund will not start with any seed money. It will be announced on the website and the Journal.

35. Joyce Brehm has volunteered for the post of Nomination Chair and was appointed by the President.
36. Chet Blackburn would like funds for the transferring the editorship of the Journal over to Bruce Holst. It is required that the receipts are sent to the BSI Treasurer and he will reimburse the cost. Chet also has materials that belong in the BSI Archives that he will forward to the Archive chair once a new one is appointed.
37. Carolyn Schoenau brought up the subject of the online contribution forms found on the BSI website. She suggested using dropdown menus listing the various funds that people can contribute to and to now include a category 'other' so donors can specify where they want their money to go. The current categories are BIC, Color Plate Fund, Bromeliad Society, Education, Research, World Bromeliad Conference, Awards, and now the BSI World Headquarters.
38. The President thanked Chet Blackburn for his dedication and quality he brought to the BSI Journal. There was a loud round of applause.
39. Keith Golinski, whose term ends this year, also wanted to thank the Board for their friendship and cooperation. He hopes the new Director can do even more than he has.

Obituary: Peter Temple Derek Butcher¹

Peter Temple passed away in England on August 4, 2002 at the age of 90. He was involved with bromeliads for over 50 years, having been a contemporary of Mulford Foster. In the 1970's, he was a keen member of the active British Bromeliad Society. Mr. Temple wrote several articles for the Bulletin (precursor to the Journal), but was better known for his editing of the English version of *Bromeliads for Home, Garden and Greenhouse* by Werner Rauh, 1979. He was a co-translator of the original German edition with Harvey Kendall, who we are pleased to add is still a member.

¹ BSI Cultivar Registrar

BSI 2001 FINANCIAL REPORT

Balance sheet as of 12-31-2001

CURRENT ASSETS	End 2000	End 2001
Cash - BSI Gen Fund Spec	49,682	51,466
Cash - Life Membership Spec	12,979	13,771
Cash - Padilla Endowment	7159	5,381
Cash - BIC Account	19,183	9,246
Cash - WBC Account	27,525	28,937
Cash - WBC Scientific Meeting	5,432	9,585
Total Cash	121,961	118,385

BSI Budget 2001 and 2002

RECEIPTS	2001 Approved	2001 Actual	2002 Budget Approved
Advertising - Journal	2,000	962	1,500
Color Fund	4,500	5,939	3,000
Donations to BIC	0	1,953	0
Donations to BSI	1,000	835	1,000
Interest - General	5,500	6,264	5,000
Judges Certification	200	0	0
Judges Certification Pins	100	0	0
Medallions - Trophies	1,200	194	3,400
Memberships	43,000	41,019	40,000
Memberships - Life	0	1865	0
Old Journals	0	138	0
Postage prepaid	6,000	3,331	6,000
Publications	7,000	14,588	8,000
Seed Fund	700	514	300
Slide Programs	200	275	100
Deficit/Profit	2,300	2,954	0
WBC 2002	50,000	20,245	50,000
Totals Receipts	123,700	101,076	118,300

DISTRIBUTION	2001 Approved	2001 Actual	2002 Budget Approved
Administrative	50	0	100
Affiliate Societies	100	0	0
Bank Charges	75	0	0
Credit Card Charges	700	985	2,500
Cultural sheets	0	0	500
Director/BSI meetings	400	718	400
Fireproof File Cabinet	0	908	0
Grants	2,000	2,068	2,000
Journal - Allowance	3,000	3,000	3,000
Journal - Envelopes	0	1640	0
Journal - Mail service	12,500	12,395	9,000
Journal - Miscellaneous	750	929	900
Journal - Printing & photos	33,000	33,310	33,000
Journal - 50 yr. Index	0	507	0

Judges Certification - Expenses	200	106	100
Judges Certification - Handbook	800	0	0
Life Membership	0	1740	0
Medallions & Ribbons	3,200	528	3,200
Membership - Contract	4,800	4,800	4,800
Membership - Expenses	4,100	2,302	4,000
Nominations Committee	100	0	100
Old Journals	0	79	0
President Expenses	100	0	100
Publications	4,000	7,582	5,000
Roster	4,000	856	0
Secretary expense	0	0	100
Slide program	200	25	200
Treasurer expenses	150	79	200
Web site	1,200	144	1,500
WBC 2000	48,275	8,088	47,600
California Sales Tax	0	7,718	0
Total Expenditures	123,700	103,270	118,300

Call For Nominations for the Office of Director 2003-2005 Term

Thomas W. Wolfe¹

The current vacancy occurs for the following region: California: 1 director

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 January 1, 2003 and March 18, 2003, inclusive. Nominations must reach the chairman of the Nominations Committee by March 20, 2003. Nominations by telephone will be accepted through March 15, 2003 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: Joyce Brehm, BSI Nominations Chair, 5080 Dawn Street, San Diego, CA 92117-1352. E-mail: joycesjoy@aol.com.

¹ BSI President

Styrofoam Anchors: A Tip for Potting Rootless Bromeliad Offsets. Or: "Hold 'dem' Puppies"

Bill Timm¹

When potting rootless offsets, use pieces of Styrofoam to hold them in place in an upright position. Pot your plant in your own medium, centered, of course in the pot and place pieces of Styrofoam around the base of the plant. I use 3 pieces about 1" square. You can use pieces of old ice chests or the packing from radios, televisions, etc. Secure the Styrofoam in place using bamboo skewers (used for fondue dipping or shish kebabs). Use larger pieces of Styrofoam for larger plants. Push the skewers through the Styrofoam and deep into the potting medium. Angle the skewers with the tops away from the plants.

This will hold the plants securely until it takes root, at which time remove the skewers and Styrofoam. The skewers will last about a year and will then begin to decompose. Styrofoam is known for its persistence and will not siphon away water from the plant or damage it in any other way. Once in a great while, a stray root will grow into the Styrofoam, but it can easily be removed or just cut away.



Photograph: Bill Timm

Figure 5. Styrofoam blocks held into place with bamboo skewers effectively stabilize rootless offsets until rooting can take place.

¹ Northport, Florida

Tillandsia candelifera Rohweder: A Case of Misplacement

Derek Butcher¹ and Renate Ehlers²

Tillandsia candelifera was described in the rarely seen botanical magazine *Senkenbergia* (Rohweder 1953) but did not get much exposure until it was treated as a synonym of *Tillandsia imperialis* (Smith & Downs 1977). This description was a combination of attributes of both *T. candelifera* and *T.*



Figure 6. *Tillandsia candelifera*.

imperialis, though no reason was given. We consider the practice of allowing taxa to be placed in synonymy without explanation to be flawed. It causes the action to be explored again and again, to ascertain the merits for such a move.

In the late 1980's, the second author received a *Tillandsia candelifera* plant from E. Kamm in Honduras. This confused her somewhat because this plant had been treated by Smith and Downs (1977) as a synonym of *T. imperialis*. In 1989, when visiting Werner Welz at the Hamburg University Botanical Garden, she obtained the book *Die Farinosae in der Vegetation von El Salvador* (Rohweder 1956). This, in turn, led her to the Senkenberg Museum and the acquisition of a Latin description of *T. candelifera* (Rohweder 1953).

In 1990 the plant from E. Kamm flowered and it did match the description of *Tillandsia candelifera*. In May 1991, a plant from another source flowered with the same attributes. In November, the same year, a plant labeled *T. ponderosa* flowered, and it also matched the description of *T. candelifera*, but not that of *T. imperialis*. Something had to be done to resurrect *T. candelifera* to species status!

¹ BSI Cultivar Registrar

² Stuttgart, Germany

Luther (1994) did confer species status to *Tillandsia candelifera*, but with no explanation for this action.¹

Clearly we are referring to two separate species, with *Tillandsia imperialis* basically having a short stubby inflorescence and *T. candelifera* having a long slender inflorescence, as if both could be called candle-like! Because the description of *T. candelifera* has never been published other than in Latin, the English version is shown below.

Tillandsia candelifera Rohweder, Senckenbergia 34: 109. 1953. **Type:** Mexico. Dept. Santa Ana: Hacienda Los Planes, NE Metapan, Cloudforest of Miramundo, 2000-2100 m, 16 Dec. 1950, *Rohweder 144* (HBG).

Plant stemless, flowering to 50 cm high. **Leaves** somewhat rigid, forming a bowl shaped rosette. **Sheaths** oval, to 15 cm long, merging with the subspreading blades. **Blades** to 30 cm or more long, lingulate, acute, apiculate, 6 cm wide at base, both sides almost glabrous. **Scape** erect, shorter than the leaves, covered by the sheath whose erect blades are almost the same but shorter than the rosette leaves. **Inflorescence** equalling or a little exceeding the leaves, bipinnate, paniculate, candle-shaped, 15-25 cm long, 3 cm diam. **Primary bracts** glabrous, sheath narrow, not at all inflated, all hiding the axis and axillary spikes, blades recurved or spreading, the lower ones similar size to the scape bracts, the upper ones shorter. **Spikes** 8-10 or more, the lower ones remote, the others more closer, strictly erect, appressed to the axis, strongly complanate, to 1 cm long stipitate, 4-5 cm long, 1.5 cm wide, rachis short, 3-flowered. **Floral bracts** erect, 3.5-4.5 cm long, narrow lanceolate, acute, membranaceous, tip keeled, glabrous, smooth, exceeding the sepal. **Flowers** to 8 cm long, erect. Sepals free, 3 cm long, narrow lanceolate, somewhat obtuse, membranaceous, carinate, glabrous, smooth. Petals violet, erect, forming a narrow tube, tip subspreading, a little shorter than the stamens. **Anthers** 1 cm long, narrow linear. Style a little exserted.

Paratypes: Mexico. Dept. Santa Ana: Hacienda Los Planes, NE Metapan, Cloudforest of Miramundo, 2000-2100 m, 16 Dec. 1950, *Rohweder 145* (HBG), *146* (HBG), *Rohweder 147* (SMF); Dept. Santa Ana, Hacienda Monte Cristo, NE Metapan, Cloudforest of Monte Cristo, 2200 m, 7 Jun. 1951, *Rohweder 148* (HBG), *149* (B); 25 Feb. 1946, *Carlson 929* (F).

Rohweder did not compare his plant with any other *Tillandsia* to help us understand why he considered it unique.

The description of *Tillandsia imperialis* E. Morren has likewise never been published in English and is based on that in Mez (1935) and is shown below.

Tillandsia imperialis E. Morr. ex Mez, Pflanzenreich IV. 32 [Heft 100]: 482. 1935. **Type:** Mexico. Vera Cruz: Orizaba, 1866, *Bourgeau 2389* (Holotype, K; photo, GH).

Plant to 50 cm high. **Leaves** few, to 40 cm long, to 6 cm wide next to sheath, then gradually tapering to an acute tip very often recurved, above subglabrous, below grey appressed lepidote. **Scape** strong, erect, with very wide very dense sheaths, very narrow blades almost filiform, involute, much longer than the internodes. **Inflorescence** equalling the leaves or shorter, thick strobiliform, very dense bipinnate panicle, to 15 cm long and 10 cm diameter, fusiform-cylindric. **Primary bracts** large, erect, densely imbricate, from very wide ovate acuminate to reflexed tip, hiding the whole spike. **Spike** well inserted very densely pinnate in the axis, up to 4 flowered, strongly complanate, subsessile, to 6 cm long, almost 2.5 cm wide, elliptic. **Floral bracts** densely imbricate, outside glabrous, carinate towards the tip, leathery, somewhat prominently veined, the uppermost tip somewhat incurved, to 3.5 cm long, much exceeding the sepals. **Flowers** erect, to 6.3 cm long. **Sepals** equally free, submembranaceous, sub-lanceolate, obtuse, to 2.2 cm long. **Petals** longer than the sepals by 3.2 cm, tubular erect. **Stamens** exserted.

Other collections: Mexico. Oaxaca: between S. Miguel and La Galera *Liebmann 66*, without locality *Kienast, Pavon, Roetzl*.

There is also a *Tillandsia* that has a similar tall candle-like inflorescence which comes from the Caribbean that may be compared with *T. candelifera* and is called *T. hotteana*. However, *T. hotteana* has triangular leaves instead of ligulate, and different primary bracts. There are other details not as readily discernable that show these two species are not closely allied.

References

- Luther, H. 1994. De Rebus Bromeliacearum. Selbyana 14: 35.
Mez. 1935. Pflanzenreich IV. 32: 482.
Smith, L.B. & R.J. Downs. 1977. Tillandsioideae. Fl. Neotropica Monogr. 14(2): 908-910.
Rohweder. 1953. Senckenbergia 34: 109.
Rohweder. 1956. Die Farinosae in der Vegetation von El Salvador. Cram de Gruyter and Co.

¹ Note from the BIC: Harry Luther examined living material from Honduras flowering in cultivation in California and realized that it was clearly distinct from *Tillandsia imperialis* as had Werner Rauh 14 years earlier [JBS 30(6): 288. 1980].

On the Resurrection of *Aechmea cariocae* L.B. Sm.

Elton M.C. Leme¹ and Bruno Rezende Silva²

The nomenclatural history of *Aechmea cariocae* has several complicated issues. To be understood, one needs to go back in time to the year 1851, when Gaudichaud published *Pothuava comata* based only on an illustration without



Elton Leme

Figure 7. Inflorescence of *Aechmea cariocae*.

mentioning a type specimen or providing a description for the taxon. Baker (1879) transferred the species to *Aechmea* as *A. comata* and typified the taxon based upon Gaudichaud's plate. Baker (1889) broadened the concept of *A. comata* and cited the specimens collected by Glaziou 14337 and 15485 as examined material. Mez (1892) adopted Baker's 1889 concept, listing among the examined material additional specimens collected by Glaziou 14337, 15485, and 9327.

A few years later, Mez (1896) reduced the concept of *Aechmea comata*, associating it exclusively to Gaudichaud's plate and citing the species as originating from Santa Catarina. On the other hand, in the same work, Mez described *Chevaliera comata* as a separate species from Rio de Janeiro, based upon the specimens Glaziou 9327a³, 14337, and 15485. Mez explicitly excluded *A. comata* as a synonym of *C. comata* ("ubique synonym. exclusis!"), reinforcing the idea that these taxa are actually distinct species, belonging to different genera. An identical concept was maintained by Mez in 1934.

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³ The specimen Glaziou 9327 represents *Acanthostachys strobilacea* collected in Andaraí Grande, Rio de Janeiro (Smith & Downs, 1979), while the specimen Glaziou 9327b represents *Aechmea cariocae* collected at the same place. The specimen Glaziou 9327b seemingly corresponds to the specimen cited by Mez (1934-35) as Glaziou 9327a, since no specimen was found with this exact enumeration.



Elton Leme

Figure 8. *Aechmea cariocae* in cultivation.

Smith (1950, 1955), followed the concept of Mez (1896, 1934) for *Aechmea comata*, but added as a new synonym *A. lindenii* (E. Morren) Baker. Smith (1955) transferred *Chevaliera comata* to the genus *Aechmea* and, in order to avoid the pre-existing homonym [i.e., *A. comata* (Gaud.) Baker], proposed a new name for the taxon, that is, *A. cariocae*.

Smith & Downs (1979) maintained the distinction between *Aechmea comata* and *A. cariocae*, even as to include them in different subgenera, *Ortgiesia* and *Chevaliera*, respectively. Nevertheless, the name *A. lindenii* prevailed over *A. comata*, since these authors considered the basionym *Pothuava comata* as illegitimate. In relation to *A. cariocae*, the referred authors selected the specimen Glaziou 15485 as lectotype.

In the process of revising *Aechmea* subgenus *Pothuava*, Wendt (1997) considered *Aechmea cariocae* as a new synonym of *Aechmea squarrosa* Baker. According to Wendt, "the types of *A. squarrosa* and *A. cariocae* were compared and there were several similarities of the inflorescence, leaf apices, sepals and floral bracts," which would justify the proposed synonymy. Nevertheless, taking into consideration that the existence of similarities does not mean the same as absence of differences, we initiated a study for the taxonomic reevaluation of *A. cariocae* and *A. squarrosa*.

After comparing the photos of the types of *Aechmea cariocae* and *A. squarrosa*, specimens deposited in Brazilian herbaria, and specimens of both species flowered in cultivation, we arrived at the conclusion that their morphological differences are greater than their similarities. *Aechmea cariocae* can be differentiated from *A. squarrosa* in the following characteristics: leaf blades 12–15 cm wide, with spines 4–7 mm long (vs. ca. 5 cm wide, spines 1.5–3.5 mm); inflorescence 5–9 cm in diameter (vs. 4–4.5 cm in diameter); floral bracts 25–30 mm long, thick-coriaceous and lignified, densely and coarsely white-lepidote, apex attenuate-mucronate (vs. ca. 12 mm long, thin in texture, glabrous or nearly so, apex bearing a long and slender spine); flowers (45–)50–60 mm long (vs. ca. 25 mm long); sepals (17–) 20–23 mm long (vs. ca. 14 mm long); petals without appendages but bearing 2 conspicuous longitudinal callosities (vs. bearing 2 fimbriate appendages above the base); ovary 17–20 mm long (vs. ca. 5 mm long); and epigynous tube crateriform, ca. 5 mm long (vs. very short).

In order to return to the original concept of *Aechmea cariocae* as conceived by Mez (1896, 1934–35), Smith (1955) and Smith & Downs (1979), we present the following description:

Aechmea cariocae L.B. Sm., Smithson. Misc. Collect. 126: 13, 228. 1955. **Type:** Brazil. Rio de Janeiro: Rio de Janeiro, Vila Nova, 1883–1884, *Glaziou 15485* (lectotype: K, not seen; photo US).

Chevaliera comata Mez in C. DC., Monogr. Phan. 9: 153. 1896.

Aechmea squarrosa sensu Wendt, Bot. J. Linn. Soc. 125: 268. 1997; non Baker. 1889.

Plant epiphytic, propagating by stout basal shoots, flowering 100–150 m high. **Leaves** ca. 20 in number, suberect-arcuate, coriaceous, ca. 2 mm thick, forming a broadly crateriform rosette covered on both sides by a white membrane of fused scales, mainly abaxially; sheaths suboblong to elliptic, scarcely wider than blade, 20–35 × 15–18 cm, castaneous, bearing transversal white bands abaxially; blades sublinear-attenuate, not narrowed at base, channeled at the base, 100–250 × 12–15 cm wide, apex acuminate, ending in a stout dark brown pungent spine ca. 2 cm long, coarsely spinulose, spines subtriangular, straight or curved, prevailing antrorse, dark brown, 4–7 mm long, 3–20 mm apart. **Scape** stout, suberect, ca. 40 cm long, ca. 45 mm in diameter, light green, completely covered with cinereous trichomes; scape bracts exceeding the internodes, imbricate, completely covering the scape, completely covered with a white membrane of fused scales, the basal ones foliaceous, 15–25 × 7 cm, spinose, spines prevailing antrorse, 2–4 mm long, the upper ones stramineous, with thinner pendent blades, entire. **Inflorescence** simple, erect, very densely strobilate, subcylindrical, 15–20 cm long, 5–9 cm in diameter (excluding the petals), apex truncate and bearing a distinct apical coma of small sterile bracts; floral bracts obovate, navicular, thick-coriaceous and lignified, tricarinate, enfolding the ovary, light green, outside densely and coarsely white-

lepidote, inside sparsely white-lepidote, apex attenuate-mucronate, 25–30 mm long, including the 7 mm long dark brown ascending mucro, 12–14 mm wide. **Flowers** sessile, densely and polystichously arranged, subspreading, ca. 30(from the main axis, (45–)50–60 mm long, bearing a sweet fragrance. **Sepals** suboblong to subovate, asymmetrical, apex nearly truncate, distinctly mucronate, ecarinate, free, light green, castaneous near the apex, densely white-lepidote, (17–)20–23 mm long, including the 3–5 mm long brown mucro, 8–9 mm wide, thick coriaceous except for the membranaceous, hyaline and glabrous lateral wing. **Petals** subspatulate slightly narrowed above the middle, apex subrounded to nearly truncate and minutely apiculate, basal 2/3 white, apical third cobalt blue, erect except for the spreading-recurved apex, (35–)40–48 × 9–10 mm, free, strongly twisted and turning rose after anthesis, bearing two well developed longitudinal callosities ca. 20 mm long, 1–1.5 mm wide; filaments whitish, partially concealed by callosities, 21–25 mm long, ca. 1.5 mm wide, complanate, dilated towards apex, the antepetalous ones adnate to petal for 10–20 mm, the antesepalous ones free. **Anthers** sublinear, base obtuse, apex acuminate, dorsifixed at 1/3 of its length above the base, 10–12 mm long, ca. 2.5 mm wide, cream colored; **Style** cylindrical, whitish, ca. 30 mm long, ca. 1 mm in diameter. **Stigma** conduplicate-spiral, ellipsoid, lobes strongly twisted, ca. 5 mm long, ca. 2 mm in diameter, whitish, margins scalloped-papillose, papillae conspicuous. **Ovary** ellipsoid to subclavate, slightly dorsiventrally flattened, free and not fused to other ovaries, whitish, 12–17 mm long, 8–10 mm in diameter; placentation subapical; ovules caudate, ca. 1.5 mm long including the flattened appendix; epigynous tube crateriform, ca. 5 mm long; pollen sulcate.

Material Examined: Brazil. Rio de Janeiro State: Rio de Janeiro, Andaraí Grande, 8 Nov. 1877, *Glaziou 9327b* (C, not seen; photo HB); *Glaziou 14337* (P, not seen; photo HB); Parque Nacional da Tijuca, Estrada das Paineiras, ca. 600 m, 17 Jan. 2001, *Bruno Rezende Silva 467 & Bruno Filizola*, fl. cult., Nov. 2001 (HB, R); Morro Queimado, 12 Oct. 1966, *A. Sucre 1096 & C. Pereira* (HB); Vertente sul do Sumaré, via Rua Sara Vilela, 9 Oct. 1987, *M. Gomes, R. Marquete & L. C. Giordano* (RB).

An aspect of relevance is the subgeneric position of *Aechmea cariocae*. While *A. squarrosa* belongs to subgenus *Pothuava* due to the floral bracts proportionally thinner in texture and ending in a long slender spine, petals bearing well developed appendages, and pollen porate, *A. cariocae* belongs to subgenus *Chevaliera*¹. The positioning of *A. cariocae* in subgenus *Chevaliera* is due to its floral bracts that are distinctly thick-coriaceous and lignified, with apex attenuate-mucronate, petals without any appendages, and the sulcate pollen.

Aechmea cariocae is closely related to *A. muricata* (Arruda da Câmara) L.B. Sm., which is a endemic in the Atlantic Forest of Pernambuco, northeastern

¹ The position of *Chevaliera* at the rank of genus is still controversial and is not fully accepted until a revision of all involved species is conducted.



Figure 9. Lectotype of *A. cariocae* deposited in the herbarium of the Royal Botanic Gardens, Kew, U.K.

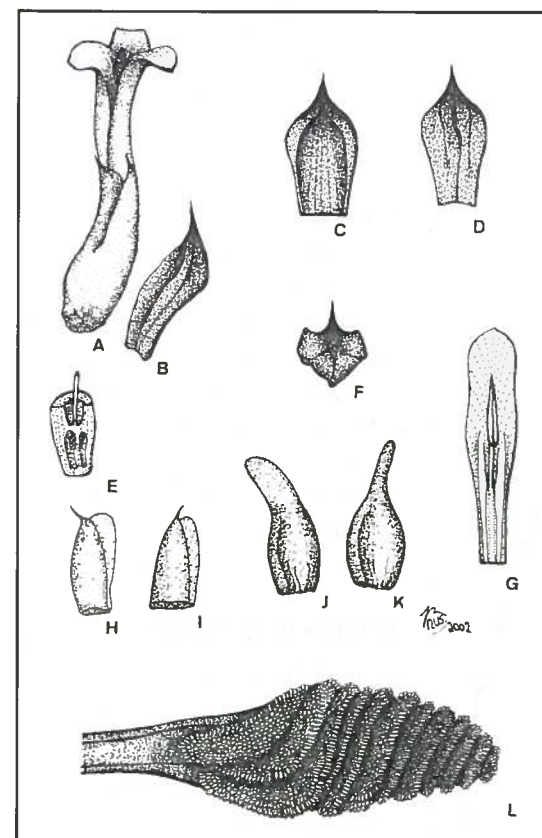


Figure 10. *Aechmea cariocae* (B.R. Silva 467 & B. Filizola): a) flower; b) floral bract in side view; c, d) floral bracts; e) longitudinal cross-section of the ovary; f) floral bract in frontal view; g) petal; h, i) sepals; j, k) ovules (drawing: B.R. Silva).

destroyed centuries ago for coffee plantations. Some portions of the forest, though, have remained intact, especially those above 600 m, and this is where all the recorded collections of *Aechmea cariocae* are from. This species is endemic to the Tijuca National Park and has only been observed in giant clumps composed of many individuals, often reaching more than 5 m across, at the main bifurcation of ancient trees with single erect trunks. The specimen studied was collected sterile from a clump at the main bifurcation of a giant "Paineira" tree, *Chorisia speciosa*. The clump was about 25 m from the ground and special climbing gear was used to safely climb the trunk and get the plant and collectors down. The whole operation took about 3 hours.

The collected specimen was taken to cultivation and on September 20th and October 4th doses of ethylene were applied to the main tank of the plant. By the end of October it had begun to bloom, possibly because of the ethylene treatment. Figure 8. The inflorescence of *Aechmea cariocae* produces flowers with long, protruded, nearly tubular, apically cobalt blue corollas which present a

Brazil. However, *A. cariocae* can be distinguished from it by its broader leaf blades (12–15 cm vs. 3.5–8 cm), floral bracts with attenuate-mucronate (not abruptly long spinose) apex, about equaling the sepals (not distinctly shorter than the sepals, mainly the upper ones), flower usually longer (50–60 mm vs. 40–44 mm), sepals shorter and broader (20–23 x 8–9 mm vs. ca. 26 x 7 mm), and petals longer and broader [(35–)40–48 x 9–10 mm vs. 30–33 x 3 mm], with a subrounded to nearly truncate and minutely apiculate (vs. acuminate) apex.

Ecology

The city of Rio de Janeiro is blessed by having in its very heart the magnificent Tijuca National Park with many granite peaks surpassing 600 m in height, as well as many waterfalls. What is now a dense recovered rain forest was

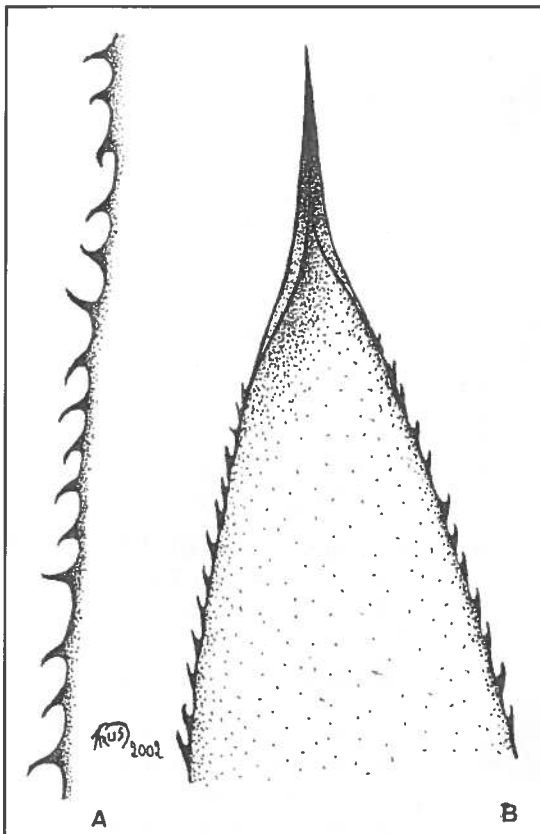


Figure 11. *Aechmea cariocae* (B.R. Silva 467 & B. Filizola): a) margins of the basal portion of the leaf; b) leaf apex (drawing: B.R. Silva).

References

- Baker, J.G. 1889. Handbook of the Bromeliaceae. London. P. 243.
- Mez, C. 1892. Bromeliaceae, in Martius, Fl. Bras. 3(3): 362.
- . 1896. Bromeliaceae, in DC., Monogr. Phan. 9: 153.
- . 1934-1935. Bromeliaceae, in Engler Pflanzenr. IV. 32: 667.
- Smith, L.B. 1950. Notas Sobre Bromeliáceas de Santa Catarina. Anais Bot. Herb. Barbosa Rodrigues 2: 3.
- . 1955. The Bromeliaceae of Brazil. Smithsonian Misc. Collect. 126(1): 13, 228.
- Smith, L.B. & R.J. Downs. 1979. Bromelioideae (Bromeliaceae). Fl. Neotrop. Monogr. 14(3): 1493-2142.
- Wendt, T. 1997. A review of the subgenus *Pothuava* (Baker) Baker of *Aechmea* Ruiz & Pav. (Bromeliaceae) in Brazil. Bot. J. Linnean Soc. 125: 245-271.

great color contrast to the light green floral bracts and sepals. The flowers present a strongly sweet fragrance.

In cultivation in the region of Itaipu, close to the Serra da Tiririca State Park, the inflorescence of *Aechmea cariocae* attracts two species of humming birds, as well as bees. Visits were more often in the morning, occurring as frequently as once every few minutes and diminished as the day proceeded and the flowers turned from blue to rose and lost fragrance.

Acknowledgements

We thank the keeper of the Herbarium Royal Botanic Gardens, Kew, for kindly providing the photograph of the lectotype of *Aechmea cariocae*; Bruno Filizola for his field support and for lending his tree climbing equipment and skills.

Building a Small Shade House

R. W. Reilly¹

I recently built a small shade house, and would like to share my experiences with you. I live in Brisbane, Australia. While the air temperature sometimes drops to 4°C for several nights in succession during winter, I have not experienced any frost. During summer, the maximum temperature can be in the range of 35°C to 38°C for several days at a time. Occasionally, such temperatures are combined with low relative humidity, e.g., 20 to 30% although, thankfully, this combination is rare as these conditions can be very damaging to many bromeliads. Winters are relatively dry, while summers are normally quite wet.

When designing a shade house, it is worth considering bromeliads' preferred growing conditions. I mainly grow the epiphytic ones such as *Aechmea*, *Canistropsis* (*Nidularium*), *Guzmania*, *Neoregelia*, *Tillandsia*, and *Vriesea*.

These plants like:

- lots of air movement around them throughout the year;
- good light (but not full sun) from all directions; and
- their potting mixture to become fairly dry between waterings.

The shade house I built is about 6 meters long. While it isn't anywhere near as large as those used by commercial growers, it is bigger than many of the "kit-type" shade houses.

The optimal shade house location is one where sunlight falls on the structure throughout the day. This results in at least 9 hours sunlight in winter, and 12 or more hours in summer. Unfortunately, I cannot achieve this outcome. In my case, the shade house receives about 5 hours sunlight in winter and around 10 hours in summer. It receives most of the morning and afternoon sun until about 2 p.m. (in winter) and 3:30 p.m. in summer.

As such, the challenge for me is to obtain the best use of the winter sun, while not "burning" plants in either winter or summer.

The frame for the shade house was built out of 20 mm galvanized pipe. I could have used hardwood timber, but as I had some spare pipe, I used it. If you are using hardwood, consider painting it. This will protect the bromeliads from being damaged by any copper salts which may leach out from the hardwood (this may occur if the timber is treated with a copper based preservative which is usually the case). It will also increase the amount of light reflected onto the plants from within the shade house.

¹ 66 Agnes St., Toowong, Queensland, 4066, Australia

I used a high gloss acrylic white paint on most of the shade house's wooden surfaces. It is certainly noticeably lighter inside than another shade house in a similar location where this was not done. Gerry Stansfield from New Zealand told me that using a high gloss acrylic paint will also make it easier to remove any algae, which may grow on the painted surface. You don't have to confine yourself to painting only wooden surfaces. Doug Upton has painted part of a concrete wall inside his shade house.

While I was able to construct my shade house to a height of only 2.4 meters, build it higher if you can, as air circulation seems to improve with increasing height. Some commercial shade houses are over 6 meters high. Also, the higher the roof, the more opportunity you have to hang plants above the benches, and thus fit more plants into the shade house.

Incorporate existing structures, e.g. walls, into the shade house wherever you can to help keep the cost down. One of my shade house's walls is an existing fence built from wooden palings. This works well in summer, and in winter I cover the fence's exterior (to the shade house) surface with reinforced plastic film to keep out the strong, cold, dry, westerly winds.

To cover the shade house I used knitted shade cloth. The eastern "wall" is 50% "shade", as is the southern wall. (In my location, the southern wall is in a very protected position). The northern wall is part of another shade house, while the western wall is the paling fence. The roof is 50% shade, which provides the right amount of shade for many bromeliads, e.g. most *Aechmea*, *Neoregelia*, *Tillandsia*, and *Vriesea* during winter, but will be inadequate for most of them during the hottest months of the year (basically mid November to end of March). During this period, more shade will be obtained by placing an extra piece of 50% to 75% shade cloth underneath the shade cloth forming the roof. (The percentage figure quoted for various types of shade cloth is the amount of ultraviolet light they exclude, not the amount of shade they give. A shade cloth with a 50% rating will let in more than 50% of the sun's rays, on most days).

To achieve better light reflection within the shade house, use a lighter-colored shade cloth, such as white or beige, rather than a dark green or black color. I've used a white colored shade cloth for the roof and found it makes a significant difference. However, the shade cloth will discolor if wet leaves are allowed to accumulate on it.

To improve the amount of sunlight reaching the shade house during winter, I remove any overhanging tree branches at the start of winter. I also regularly remove any leaves, which may accumulate on the shade house's roof (My shade house has a flat roof to help keep the cost down. However, a "gable" type roof, such as most houses have, would improve air circulation and help shed leaves).

For the shade house's benches, I followed the following principles:

- If at all possible, keep the plants at least 30 cm above the ground to enable good air circulation;

- The benches should not exceed 90 to 100 cm in width if they can only be approached from one side, e.g. if they are located adjacent to a wall;
- Heavy "gauge" galvanized mesh is better than most other products for a bench top, as it doesn't rot or rust. (I was fortunate in obtaining some second-hand from a shade house which was being demolished. Otherwise, it can be rather expensive). Further, because the mesh doesn't rust, bromeliads grown underneath the benches aren't "burnt" by contact with water containing iron or other contaminants - as can happen if rusty reinforcing mesh used for concreting is utilized.

Most of the tillandsias are hung on sheets of galvanized mesh suspended from the wall formed by the paling fence. This is similar to the method used by Barry Gen and Nev Ryan, two of Queensland's most experienced *Tillandsia* growers, for growing many of their plants.

They also suggest having the bottom of the galvanized mesh sheet further away from the wall than the sheet's top. In other words, the sheet is tilted away from the wall. This reduces the amount of water which drips from one plant onto another when they are watered. In turn, this gives you better control over the amount of water each plant receives.

I also have some sheets of galvanized mesh suspended horizontally about 600mm below the shade house's roof. Many of the tillandsias I have growing in pots and tree fern "logs" like this environment. Also, I have some tillandsias hooked onto the shade cloth covered southern wall. They seem quite happy in this environment.

On the floor of the shade house, I have more light reflecting material in the form of pine bark chips. These came from Slash Pine and Caribbean Pine trees, and are light brown or orange in colour when new, rather than much darker coloured bark obtained from Hoop Pine. As it retains moisture when watered, the pine bark also improves the humidity in the shade house. Other light reflecting material can also be used to good effect. For example, light-coloured pebbles can produce a similar outcome.

I hope these ideas are of some use if you decide to build a shade house. I wish to thank Gerry Stansfield, Doug Upton, Barry Genn, and Nev Ryan for sharing their experiences with me.

MOVING?

If your address is changing, please notify the BSI Membership Secretary four to six weeks in advance. Even when you are temporarily or seasonally away, your bulk mail is either discarded by the Post Office or, as in the case of your JOURNAL issue, is returned to us at a postage due cost of .99 cents within the USA.

Meet the New Membership Secretary - John Atlee Carolyn Schoenau¹

It seems like only yesterday, but it's been nearly seven years since I became your membership secretary. On March 1, 2003, the new membership secretary takes over and I want to introduce him and ask that you give him as much cooperation and assistance as you have always given me.

The BSI is fortunate that John Atlee volunteered to be membership secretary. John has been a BSI Director from the Western Region. He resides in Albuquerque, New Mexico, has grown bromeliads for over 20 years, and also is a Master Gardener and author of the *New Mexico Master Gardener Manual*.

Do not worry; I am not dropping out of BSI and bromeliads. I will still attend shows, meetings, judging symposia and especially World Conferences. Ron is retiring from the university in June; we plan on traveling, playing in a few more duplicate bridge tournaments, visiting our grandchildren and getting to spend more time in our beach condo. Best of all, the plants will get cared for, better than they are now because Ron will be home and I'll nag him about fertilizing and repotting.

Many of you have become special bromeliad friends during these years of service to BSI. Some of you, I have met in person at World Conferences or local and out-of-state shows but so many more I have known only through e-mail. These years will always be special in my memories as happy times and remembered as a labor of love. In saying goodbye, I leave with mixed emotions. But most of all, I know that I am leaving you, our members, in good hands.

World Bromeliad Conference 2002 Show Award Winners - St. Petersburg, Florida Hattie Lou Smith²

Entries: There were 385 entries, including both floor and table exhibits, from 123 entrants. Two hundred eighty of these were bromeliads entered by hobbyists, 85 were by commercial growers, and 20 exhibits were displayed.

Awards: A total of 64 awards were handed out at the conference. Forty-four were judged show awards and 20 were non-judged conference exhibit awards. The exhibit awards were given to six commercial floor exhibits, seven affiliate society floor exhibits, and seven tabletop exhibits, the latter from special organizations and affiliate societies.

¹ BSI Membership Secretary

² 2002 BSI World Conference Chair

BEST OF SHOW HORTICULTURE - MULFORD B. FOSTER AWARD

Hobbyist: John Anderson, *Aechmea biflora*

Commercial: Paul Deroose *Guzmania* 'Marjan' variegated

SWEEPSTAKES:

Hobbyist: John Anderson

Commercial: Michael Kiehl

BEST OF SHOW ARTISTIC - MORRIS HENRY HOBBS AWARD

Jackie Johnson, "Marooned on the Dry Dock"

Best of Panel Judges: Michael Young, "Bromeliads on the Beach" Quilt Art

Kinzie -Bessellieu Memorial Award,

Best *Neoregelia*: John Boardman, *Neoregelia* 'Ronald'

	<u>HOBBYIST</u>	<u>COMMERCIAL</u>
DIVISION I. Single - Blooming		
	Theresa Bert, X <i>Vriecantarea</i> 'Inferno'	Ward McCrory, <i>Tillandsia</i> 'Creation'
Section A	John Anderson, <i>Guzmania</i> 'Graaf van Hoorn'	Hill's Raingreen Tropicals, X <i>Guzvriesea</i> [<i>Vriesea</i> 'Eva' X <i>Guzmania wittmackii</i> 'Deroose']
DIVISION II. Single - Non-blooming		
	Ray Lemieux, <i>Encholirium horridum</i>	Bullis Bromeliads, <i>Weraubia kupperiana</i>
Section A	Nelwyn Anderson, <i>Guzmania</i> 'Claret'	Grant Groves, <i>Neoregelia</i> 'Painted Delight'
DIVISION III. Multiple - Blooming		
	Theresa Bert, <i>Neophytum</i> Ralph Davis 'Galactic Warrior'	Hill's Raingreen Tropicals, <i>Vriesea</i> [<i>warmingii</i> X <i>ensiformis</i>]
Section A	George Aldrich, <i>Neoregelia</i> 'Yang'	Hill's Raingreen Tropicals, <i>Vriesea</i> [['Junkanoo' X Deroose 3602] X Deroose #718]
DIVISION IV. Multiple - Non-blooming		
	Terry Coulthard, <i>Aechmea fosteriana</i>	Hill's Raingreen Tropicals, <i>Tillandsia araujei</i>
Section A	Stephen Hoppin, <i>Pitcairnia</i> 'Stephen Hoppin'	Grant Groves, <i>Tillandsia usneoides</i>
DIVISION V. Horticultural Display - Single		
	John Anderson, <i>Tillandsia streptophylla</i>	Tropiflora, <i>Tillandsia concolor</i>
Section A non-blooming	Sam Smith, <i>Tillandsia streptophylla</i> x concolor	Tropiflora, <i>Tillandsia duratii</i>
Section B blooming	Helga Tarver, <i>Tillandsia elizabethiae</i>	
DIVISION VI. Horticultural Display - Multiple		
	John Boardman, <i>Neoregelia</i> 'Ronald'	Tropiflora, <i>Tillandsia concolor cuitcatian</i>
Section A non-blooming	John Boardman, <i>Aechmea</i> 'Blackie'	
Section B blooming	Magali Groves, <i>Tillandsia funkiana</i>	

DIVISION VII. Artistic arrangement. [Non-standard]

Ribbon Award	Vicky Chirnside
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DIVISION VIII. Artistic arrangement.

Miniature	Peggy Nuse, <i>Portea petropolitana extensa</i>
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Section A	Joyce Brehm, "Blue Lagoon"
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DIVISION IX. Specimen plants in non-standard containers.

Decorative Container	Magali Groves, <i>Tillandsia leiboldiana</i>
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Section A	Helga Tarver, <i>Tillandsia funkiana</i>
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DIVISION XI. Art [Section only]

Section A	Michael Young, "Bromeliads on the Beach" Quilt Art
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Cryptanthus Special Awards

Grace Goode Silver Ingot Award - Best Cryptanthus Horticultural	Eloise Beach, <i>Cryptanthus microglaziovii</i>
--------------------------------------------------------------------	-------------------------------------------------

Michael Young Award - Best of Show Cryptanthus Artistic	Jim Schrenker, <i>Cryptanthus</i> 'Diverse Pink'
------------------------------------------------------------	--------------------------------------------------

Warren Loose Award - Best Cryptanthus Hybrid	John Anderson, <i>Cryptanthus</i> 'Scott Irvin'
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Best Cryptanthus Single	Eloise Beach, <i>Cryptanthus warasii</i>
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Best Cryptanthus Multiple	Marty Baxley, <i>Cryptanthus</i> 'Sea Foam'
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Best Decorative Container	Virginia Schrenker, <i>Cryptanthus</i> 'Musk'
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Affiliates in Action**Gene Schmidt¹**

Bromeliads 2003 Auckland, the first bromeliad conference to be held in New Zealand, is planned for March 7-10, 2003. The bromeliad enthusiasts from New Zealand will be hosting the biennial Australian conference at the Waipuna Hotel in Mt. Wellington, Auckland, and it will be an event that anyone with an interest in bromeliads won't want to miss. There has been great interest shown from Australia and the USA in this conference. The format will follow the pattern established by previous Australian and World conferences. There will be seminars each day, given by selected speakers including Elton M.C. Leme, Dennis Cathcart, and Derek Butcher. While these seminars are taking place there will be tours organized for partners and those interested. The conference will also include the Bromeliad Society of New Zealand's Annual Show, and social events will include the Conference Breakfast, the Banquet, an optional Barbecue on Friday night, and a Harbor Cruise Dinner on Saturday night. To register for the conference write Bromeliads 2003 Auckland, Box 51-361m Pakuranga, Auckland, or e-mail nzbromconf@hotmail.com. Everyone is encouraged to attend Bromeliads 2003 Auckland!

Julie Greenhill and Annette Menzies write in the Journal of the Bromeliad Society of New Zealand of a new bromeliad interest group in the Hawkes Bay region. A couple of enthusiasts in Napier wondered if any others in the area

¹ BSI Affiliated Societies Chair

would be keen to start an interest group and share knowledge and plant material. The meeting was held on Anzac day and was attended by over 45 people from all areas of Hawkes Bay. Graham West of the Bromeliad Society of New Zealand was a speaker and covered cultural information as well as information on the New Zealand Society. Overall, the first meeting was a resounding success and showed a high level of interest. Regular meetings are now planned for the future. Other bromeliad study groups in New Zealand include the Northland Bromeliad Group, the Bay of Plenty Bromeliad Group, the Eastern Bay of Plenty Bromeliad Group, and the Wellington Tillandsia Study Group. (*The Journal, Bromeliad Society of New Zealand, Inc. Vol. 42, No. 5, May 2002*)

From Australia comes news of a new bromeliad group. During the last couple of months there has been some interesting work going on in Darwin about forming a new bromeliad society for the Northern Territory. E-mails have been coming and going regarding the mechanics of how to go about it, with the result being a new society formed under the title of The Northern Territory Bromeliad Study Group. Meetings will be held on the first Sunday each month, commencing at 5 p.m. These details were presented to the June meeting of the Bromeliad Society of Australia and members were pleased to extend a warm welcome to the new group. The BSA wishes them all the very best and hopes that they will be able to maintain a happy relationship with everyone in the Top End. (*Bromeletter; Journal of the Bromeliad Society of Australia, Inc., Vol. 40, no. 4, July/August 2002*)

A short note from The Southeastern Michigan Bromeliad Society Newsletter about a short-lived garden. The Tollgate Bromeliad Garden laid out with loving hope on the 18th of May 2002, was laid waste by cruel frost on the 19th of May. It was the only garden of its kind in Michigan. It possibly also enjoyed the shortest life span of any garden in Michigan. Better luck this year if you choose to try again. Also from this issue is a web site endorsement, <http://www.caire.bio.br>. The site is maintained by Prof. Ludwig Buckup, a retired professor of zoology. The web site is beautifully organized, features a photo index, and tables of seasonal blooming times. Perhaps the nicest feature is the section "Bromeliads in Habitat," which includes beautiful photos of plants in their natural setting. (*The Southeastern Michigan Bromeliad Society Newsletter, July/August 2002*)

Lynne Fieber, Librarian of the Bromeliad Society of South Florida, writes of a recent issue of the magazine of the Brazilian Bromeliad Society, *Bromelia* [2001; Vol. 6(4)], which published an article about bromeliad diversity in Ilha Grande, a 47,500 acre island in the south Atlantic Ocean located in Rio de Janeiro State, which hugs the coast for approximately 250 miles in the vicinity of the coastal city of Rio de Janeiro. Pristine and degraded Atlantic rain forests characterize the island habitat. Ilha Grande is thought to represent a microcosmical laboratory of native Atlantic rainforest bromeliad ecology and the stresses to which this plant community has been subjected, such as deforestation and subsequent alteration of the habitat to permit farming, and restoration.

Bromelia is published approximately four times per year, with each article presented in both Portuguese and English, and abundantly illustrated in color. Reading *Bromelia* is an excellent way to stay current on descriptions and studies of bromeliads in one of their true birthplaces. (*The Bromeliadvisory*, BSSF, Vol. 45, No. 8, September 2002)

Stan Oakes, Editor of the *Bromelia Post* newsletter of the Central Coast New South Wales (AUS) Bromeliad Society for the past ten years has recently been named Life Member of the Central Coast Society. Members' unanimous decision to award Stan Life Membership is an indication of their respect and appreciation for his service. It should also be noted that President Don Ryan and his wife Betty were presented with Life Membership as well. Congratulations to these three members for their unselfish attitudes towards serving their local bromeliad society. (Bromelia Post, Central Coast NSW Bromeliad Society, Inc., August 2002)

In a letter published in the *Orlandiana*, Bromeliad Society of Central Florida newsletter, Bruce Holst, their August speaker, makes this request to its members, "I would like to ask all of you that have access to the Internet to please visit the Natural Resources Defense Council (NRDC) web site <http://www.savebiogems.org/macal/> to learn more about the efforts to save the Macal River Valley from being flooded. While Belize needs to develop inexpensive energy sources, this project would actually raise electric rates while flooding one of the few remaining pristine areas left in Central America. The site also provides a template for you to send an electronic message to the company who is pushing to build the dam over objections by scientists and conservationists worldwide, and without due process in Belize. If you don't have Internet access, the mailing address is: Angus Bruneau, Chairman of the Board, Fortis, Inc., Fortis Building Suite 1201, 139 Water Street, St. John's, NF A1B 3T2, Canada." In a letter published one month later in the same publication, Herb Plover, Editor of the *Bromeliana* New York Bromeliad Society newsletter, follows with this information. "...Of perhaps more immediate concern to Americans is the approval by the Army Corps of Engineers for commercial rock mining in the Everglades. This will involve a project to bulldoze and dynamite a thirty-mile square area of the Everglade's fragile wetland habitat in order to extract 1.7 billion tons of limestone rock that lie underneath. The Corps was given charge of an environmental project to protect and restore the Everglades. But before even completing the initial studies to determine the feasibility of the proposed program, the Corps has contracted for the destruction for rock mining. The National Research Defense Council has instituted a lawsuit to block the destruction. NRDC Senior Attorney Brad Sewall says: "They're going to destroy the Everglades in order to save them...Unfortunately, we can only be certain of the destruction. What, if anything, gets saved is pure conjecture." The home page for the NRDC web site can be found at www.nrdc.org. (*Orlandiana*, Bromeliad Society of Central Florida, Vol. 28, No.s9 & 10, September & October 2002).

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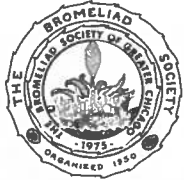
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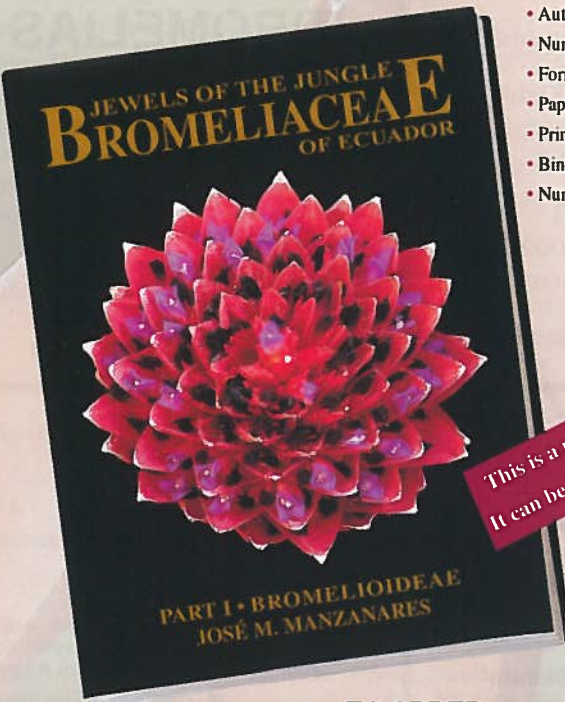

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