



THE CALOOSAHATCHEE BROMELIAD SOCIETY'S

MERISTEM

Jan-Feb 2023



CALOOSAHATCHEE BROMELIAD SOCIETY OFFICERS

EXECUTIVE COMMITTEE

PRESIDENT— Julie Stein 919-522-1182 FLAGIRL56@aol.com

Past— PRESIDENT— Vicky Chirnside 941 928-3111 (dampearth@me.com)

**Vice-PRESIDENT— Dale Kammerlohr 863-558-0647
(dzdaze@embarqmail.com)**

SECRETARY— Alison Ackerman 239-851-3176 (Alison@spikowski.com)

TREASURER—Betty Ann Prevatt 239-229-7781 (bprevattpcc@aol.com)

STANDING COMMITTEES CHAIRPERSONS

NEWSLETTER EDITOR—Larry Giroux 239-850-4048 (DrLarry7@gmail.com)

FALL SALES CHAIRS—Brian Weber 941-256-4405 (brianweber1b@hotmail.com)

PROGRAM CHAIRPERSON—Vacant

WORKSHOP CHAIRPERSON—Vacant

SPECIAL TRIPS— Kyle Wade 570-269-5103 kwade46.kw@gmail.com

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Julie Stein 919-522-1182 (flagirl56@aol.com)

MEMBERSHIP—Betty Ann Prevatt 239-229-7781 bprevattpcc@aol.com

Larry Giroux 239-850-4048 Drlarry7@gmail.com

OTHER COMMITTEES

DOOR PRIZE—Debbie McPhail 239-332-4607 or 239-910-3836 ;

email-deb.mcphail@yahoo.com & Membership

HOSPITALITY (Monthly Refreshments)—Diane Cornelison 239-233-7037

Party Chair—Vacant

RAFFLE TICKETS—Greeter/Membership table volunteers—Dolly Dalton, Luli Westra

RAFFLE COMMENTARY—Larry Giroux

GREETERS/ATTENDANCE—Betty Ann Prevatt; Dolly Dalton (dollyd@comcast.net), Luli Westra

SHOW & TELL—Dale Kammerlohr 863-558-0647

FM-LEE GARDEN COUNCIL—Alison Ackerman 239-851-3176 Alison@spikowski.com

LIBRARIAN—Vacant

HISTORIAN—Tom Cowell 732-735-0121 njtom732@aol.com

MARCH AUCTION CHAIR—Larry Giroux 239-850-4048 DrLarry7@gmail.com

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THE CALOOSAHATCHEE BROMELIAD SOCIETY

January Meeting: Sunday, Jan 15th 2023
February Meeting: Sunday, Feb 19th 2023

**Our Meetings have returned to the Ft. Myers– Lee
County Garden Council Building
2166 Virginia Ave. Fort Myers.**

The facility is north of the Edison Gardens parking lot and about 1/2 miles north of our previous meeting location— Covenant Presbyterian Church. Virginia Ave is approximately 3 miles north of the intersection of Colonial Blvd. and McGregor Blvd. and is the 2nd Street north of the Edison Gardens
(**Membership sales are allowed at the January and February meetings. Any changes will be announced before the meeting**)

The CBS Board has established a more structured schedule for our meetings, which we will adapt as necessary—

***12:30-1:15:** Doors open, check-in, membership, distribution of door prize tickets and sale of raffle tickets, membership or speaker plant sales.

***1:15-1:45:** Workshop **1:45-2:00:** Break, plant sales continue

2:00-2:15: Business Meeting **2:15-3:00:** Program followed by door prize

3:00-3:30: Break for refreshments **3:30-4:00:** Show and Tell and Raffle

4:00: Clean up

Please bring food, Friendship, Raffle and Show and Tell Plants

MEMBERSHIP DUES FOR 2023 ARE DUE BY THE END OF JANUARY

Membership renewal fees are \$15/20 single/dual; New member dues: \$20/25, single/dual payable by check or cash at the meeting or by mail to

Betty Ann Prevatt, CBS Treasurer 2902 Second Ave. Fort Myers, FL 33916

The Caloosahatchee Bromeliad Society is an active Affiliate of:



Cryptanthus Society



BSI



FCBS



FM/LC GC

January and February 2023 Programs

At this time we do not have a Program Chairperson. If anyone would like to assume this position, please talk to Julie Stein ASAP. Also if anyone would like to give or knows someone who would like to present a program to our group, please contact any Officer of the Society. We pay a Speakers Fee and travel expenses (based on distance) to both member and non-member speakers.

At this time we do not have programs for January or February. We will report to the membership if this changes. Membership Sales will be allowed, unless a speaker is found and wishes to sell plants.

The Board of Directors want to thank the Vendors, Volunteers, the Edison/ Ford Winter Estates and especially the Southwest Florida community for all their help, cooperation and attendance that made it possible to overcome what seemed like insurmountable circumstances and conditions in such a short time.

With the New Year we are in need of VOLUNTEERS to keep our Society running efficiently. Please consider filling the current vacant positions.

PROGRAM CHAIRPERSON—Arrange programs for 9 meetings a year (excluding March, Auction month; April, Birthday Party and December, Holiday Party). Confirm date with speaker and arrange for any equipment needed. Contact Editor with program information by the Monday preceding the first Sunday of the month. Greet and assist speaker; make introduction.

WORKSHOP CHAIRPERSON— Request members with "expertise" about the pre-selected topics to attend workshops and participate in discussions each month except, March, Auction month; April, Birthday Party month and December, Holiday Party month. Call Editor with program information by the Monday preceding the first Sunday of the month. Call Editor with program information by the Monday preceding the Sunday of the month. Encourage members to attend and bring plants, organize meeting room, announce the meeting and introduce topic at meeting.

LIBRARIAN— Manage the content of the library during meeting times, including tracking and recording the loan of books. A complete list of duties in in the library.

WORKSHOP PRESENTERS— We need volunteers to give 20-30 min. presentations on a variety of topics of interest to the members. It can be a slide show, Q & A or a hands-on session from topics previous compiled or of your own choice.

PLEASE CONTACT President JULIE STEIN if interested.

NEW CBS OFFICERS FOR 2023

We are very fortunate that for the upcoming year, the current CBS OFFICERS have agreed to continue in their current positions. At the November meeting they were elected to serve the 2023 term. The Officers will be sworn in at the January meeting.

PRESIDENT— Julie Stein

Vice-PRESIDENT— Dale Kammerlohr

SECRETARY— Alison Ackerman

TREASURER—Betty Ann Prevatt

Bromeliad Exposé' By Larry Giroux

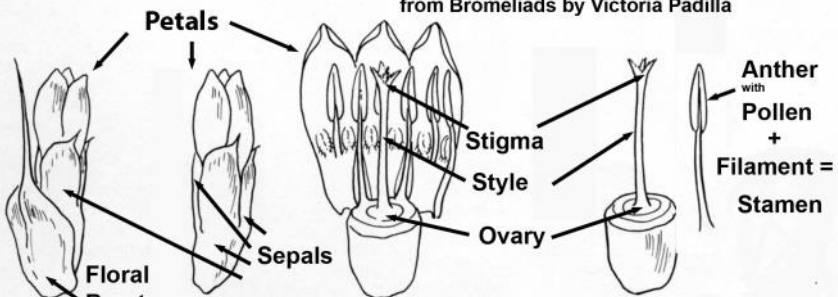
The Making of Bromeliad Seeds.

I thought it was time to review of the anatomy of the Bromeliad sexual organs, as they might be referred to, and the process that leads to seed production after hybridizers, be them birds, insects or man, have their way with them.

On our front cover and back page are seen the spent and full bloom flowers of *Encholirium spectabile* as seen in its natural habitat in the arid regions of Northeastern Brazil. Its flowers demonstrate the general characteristics of bromeliad flowers (see back page). Although not always obvious, all bromeliads will have flowers as far as I can recall. Not all bromeliads, however, will have offsets as indicative of asexual reproduction. *Tillandsia utriculata* is an example of this. (As a side note, this

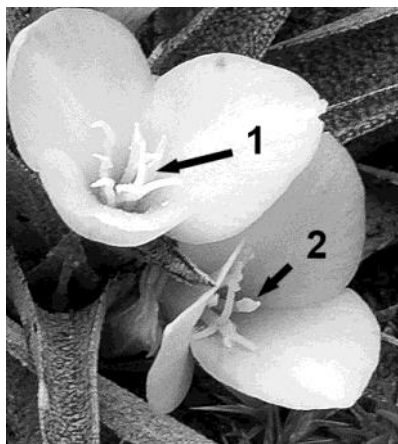
A bromeliad flower sketched by Anne Ophelia Dowden

from Bromeliads by Victoria Padilla



Captions by Larry Giroux

is a major reason why we are so concerned in Florida about the loss of this tillandsia and other native bromeliads due to the effects of the “evil weevil”. If the weevil devours the meristem before the plant has a chance to set seed, offset reproduction is not an alternative.) Even though all bromeliads are capable of producing flowers to accommodate sexual procreation, many factors such as intensity and duration of sunlight, seasonal changes, temperature variation and others, must occur in the life cycle of the bromeliad to bring about inflorescence production



This picture shows two perfect flowers of a *Cryptanthus*. (1) is pointing to the 3 armed stigma, which receives the pollen. (2) indicates one anther laden with pollen. As with most bromeliads, this *Cryptanthus* can not self-fertilize itself. Photo by E. Leme

and setting of seed. Therefore, individual growers may be growing their plants in less than optimal cultural conditions and/or environmental conditions to have functional flower production.

These reproductive parts may not always be obvious to the eye, as with neoregelias or aechmeas whose stigmas and anthers are deep within the well of the flower or enclosed by the petals. There are many other bromeliads such as tillandsias, where these parts are openly exposed. Fortunately, evolution has adapted to these variations by providing various creatures that bring about fertilization and ultimately seed production in their natural habitat. In cultivation these pollinators may be lacking and human intervention is necessary.

Certain species are dioecious; that is the male and female flowers are found on different individual plants such as the species: *Androlepis skinneri*. The genus *Cryptanthus* has both imperfect

flowers with only stamens and perfect flowers with both stamens and the pistil found in the same flower. Most bromeliads, however, have perfect flowers.

Bromeliad flowers have evolved to allow for the transfer of pollen by very specific transmitters. These include birds, insects and other carriers that in most cases accidentally transfer pollen from the anthers, which sit atop of the stalks called filaments (the filament and anther with its pollen is called the stamen) to the stigma, which is a very specialized structure at the superior aspect of the style (the ovary, style and stigma constitute the pistil). If you magnify the inside of a flower during its receptive time, you will see tiny sticky hairs to which pollen will adhere to the three arms of the stigma. Wave like motions will direct the pollen toward the center of the stigma and eventually down the style into the ovary where the ova are fertilized.

In the close quarters between the petals, self-fertilization would be inevitable except for a safeguard imposed by nature. There are very few bromeliads that have flowers that can self-fertilize. This safeguard is called “self-incompatibility”, which is the property to identify self and non-self parts of the male and female structures. This has obvious advantages in the genetic makeup of plants just as our laws prohibiting incest in humans do. These include the prevention of the expression of recessive and dominant genes, which may result in susceptibility to diseases, genetic deformities and weakening of the genetic line. There are three types of bromeliad seeds, which are more or less specific to their Bromeliad sub-family.

The *Tillandsioideae* subfamily which includes the vrieseas, guzmanias and tillandsias, since they are true epiphytes have seeds which are very light which enabled them to float on the air currents and fasten tightly onto their final destinations such as tree trunks, branches and rocks. They have hair like protrusions which allow them to be propelled by the wind. The seeds also have the distinction of taking a long time to germinate.



In the top portion of the picture to the left, you can see the numerous split capsules of this tillandsia. These are the first type of seeds mentioned in the article. The seeds of true epiphytes such as tillandsias, vrieseas and guzmanias spring from their capsule and are carried to surfaces such as tree limbs. In the shadehouse, months after the seeds have been released, you will find seedlings starting on screens, walls and other plants. I was taught by a tillandsia hybridizer that you should tie a paper bag around the inflorescent of this type of bromeliad when the capsule is about to break open. Thereby, you are able to collect the seeds more efficiently. Photo by Larry Giroux

hybridizer that you should tie a paper bag around the inflorescent of this type of bromeliad when the capsule is about to break open. Thereby, you are able to collect the seeds more efficiently. Photo by Larry Giroux



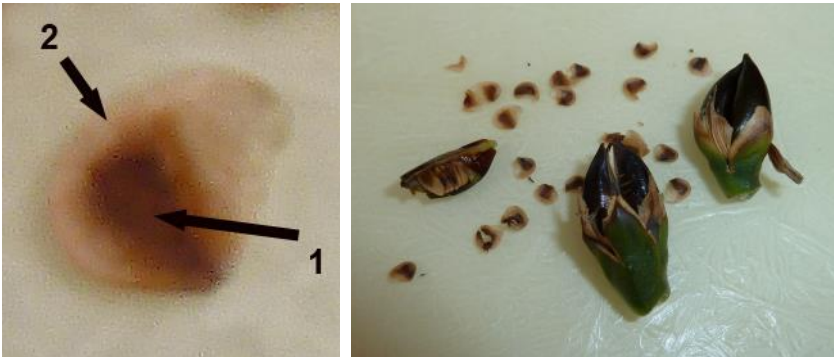
These are the fingers of Jim Irvin, who is well known for his bromeliad hybridizing skills. He is squeezing the numerous small seeds out from the ovary of a neoregelia. Plants of the sub-family *Bromelioideae*, notably plants of the *Generas Aechmea, Billbergia, Cryptanthus, Neoregelia, Nidularium* and others develop these types of berries containing ovoid or spherical seeds. Note that the seeds are clumping together; this is due to the gelatin type material that has been providing nutrition to the developing seeds within the ovary. Birds and other creatures will eat these “berries” containing the seed, probably because of this

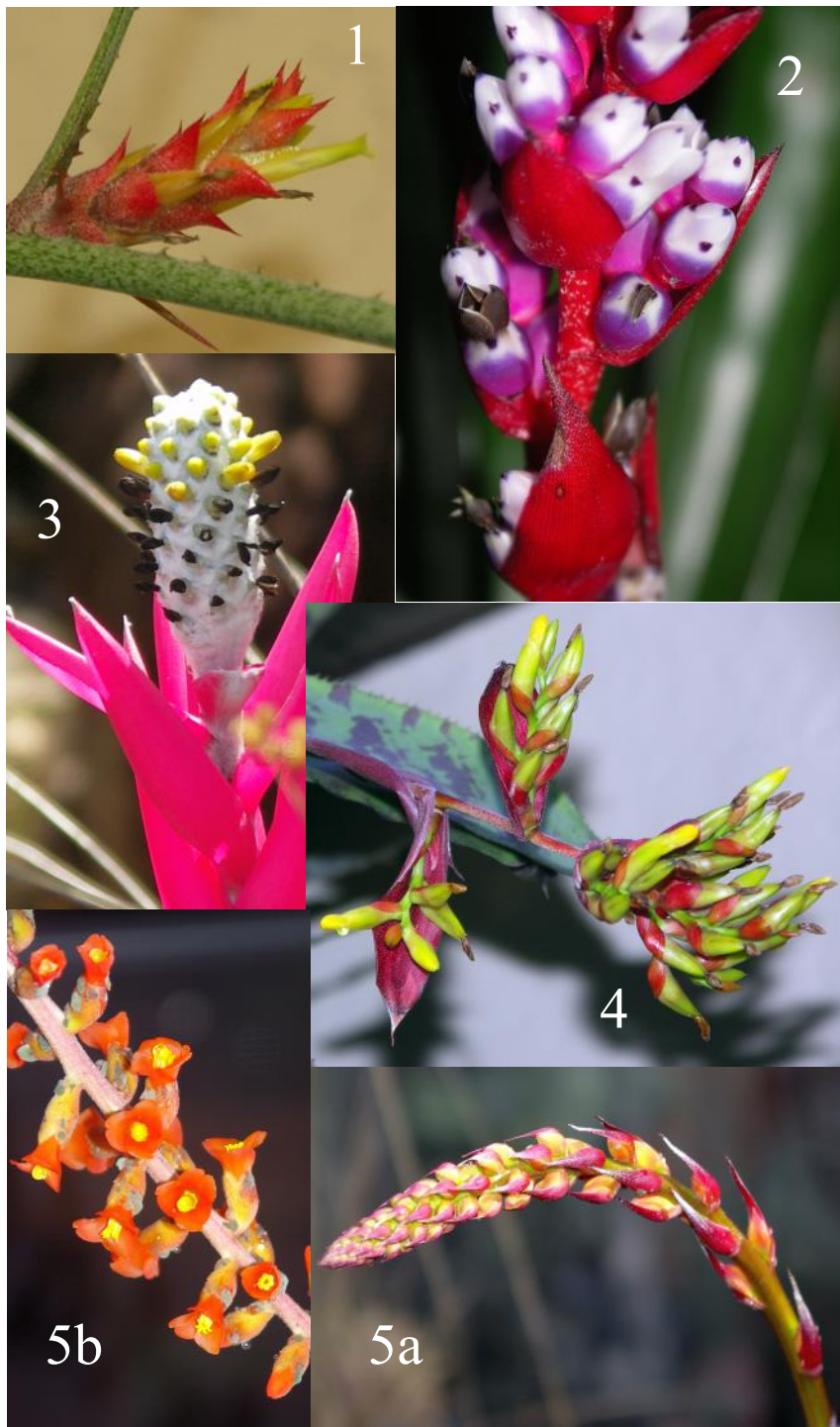
sweet material. The seeds are indigestible and will pass through the creature and be deposited on a surface that hopefully will permit the sprouting of the seedlings. In cultivation it is best to wash the mash of seeds in a weak chlorine solution and spray the planting media with an anti-fungal spray when planting to prevent fungus from developing and destroying the seeds or seedlings as they sprout. Photo by Jim Irvin.

Plants of the sub-family *Bromelioideae*, notably aechmeas, billbergias, cryptanthus, neoregelias, nidulariums and others develop berries containing ovoid or spherical seeds, often covered with mucous or sweet pulp. In nature the seeds in these fruits are spread by animals and other creatures that may eat them or carry them away.

Lastly, pitcairnias, hechtias, dyckias and others of the sub-family *Pitcairnioideae* and the new 5 Subfamilies, separated from *Pitcairnioideae*, which are terrestrials, have seeds that are specialized to be carried by the wind by wing-like appendages or other attachments. Also out of necessity this group tends to germinate quickly when they land on a suitable surface.

Pitcairnias, hechtias and dyckias are examples of bromeliads that also have specialized seeds as do most of the terrestrials. The picture below shows mature capsules of a dyckia. The ovary has developed into three capsules. To the left in the photo, I have opened a capsule to show how the flat seeds are stacked like coins. The blown up view of an individual dyckia seed demonstrates how the portion of the seed, which will eventually germinate (1) is surrounded by a thin wing-like structure (2). In some of the other terrestrials this wing may only be present on a portion of the circumference and be more feathery. These wings allow the seeds to be dispersed by the wind. Their flat, wedge shape also permits seeds to fall into crevices easier than plumper seeds. This also benefits the seed in allowing it to germinate quicker and avoid drying up and dying. Photos by Larry Giroux.







Bromeliad Inflorescences

(1) *Acanthostachys strobilacea*

(2) *Aechmea weilbachii*

(3) *Aechmea bromelifolia*

(4) *Aechmea* 'Bert'

(5a,b) 2 stages of *Dyckia* inflor.

(6) *Canistopis*

(7) *Guzmania* inflorescent

(8) *Guzmania sanguinea*

(9) *Sincoraea* inflorescence

All photographs by Larry Giroux



10



11



12



13

(10) *Nidularium* inflorescence

(11) *Tillandsia bulbosa*

(12) *Pitcairnia* inflorescence

(13) *Quesnelia testudo*



14. *Neoregelia* flowers

15. *Billbergia* Marie Besselieu

16. *Aechmea tayoensis*

17. *Orthophytum* Heavy Metal

18. *Tillandsia funckiana*

Photos by Larry Giroux



On a trip to Brazil several years ago, I was able to catch the progression of the blooming of the inflorescence of *Encholirium spectabile*. Photo 1 on the left shows the emergence of the spike; (2) spent and blooming flowers along the inflorescence and (3) dried seed capsules releasing seeds. Note the old mother plant in the background of the 3rd photo. The 4th picture is an enlargement of the photo on the back page: the fresh blooms of one of the spikes. All photos by Larry Giroux.

Minutes of the CBS General Meeting

LC/FM Garden Council Building November 20th, 2022

Call to order: 1:20 by President Julie Stein

Guest: Sharon Hill

New Members: None

In Attendance: 24

General Meeting:

Election of Officers: The following members were unanimously elected to serve as the CBS officers for 2023: Julie Stein, President; Dale Kammerlohr, Vice-President; Alison Ackerman, Secretary; Betty Ann Prevatt, Treasurer.

Announcements:

All Committee Chairs need to notify Julie Stein concerning their willingness to serve for another year.

CBS dues needs to be turned in by the end of January.

Plant Sale: The schedule, and procedures relating to our upcoming sale were explained in detail by various members. Any members selling plants will keep 85% of their sales; CBS will keep 15% and pay the sales tax.

Alison Ackerman reported that at the Garden Council meeting, petitions were passed around to get Constitutional Amendment on a ballot concerning our “Right to Clean and Healthy Water. Without an actual constitutional amendment, various organization have little power to pursue this goal. She encouraged CBS members to sign a petition to help in these efforts. Members can also visit right2knowfl.org for more information.

Plans for our December 18 Holiday Party to be held here at the Garden Center were discussed. Members were encouraged to bring raffle plants, and a covered dish. CBS will provide the ham.

Program: CBS member Jason Mellica presented “Personal Notes about Hybridizing” in which he described how he has created many gorgeous plants with new and vibrant colors and designs. Having extra time because of the pandemic got him started again hybridizing, and he is now working on many 2nd generations. Luckily he brought many of his creations to show and sell.

Door Prizes: Debbie McPhail created 2 festive arrangements, each featuring a beautiful Neoregelia with decorative pumpkins and faux leaves. Tom Cowell also donated about 6 plants for door prizes.

Show & Tell: Betty Ann and Julie presented several plants to show, including a few with blooms that don’t normally bloom at this time.

Raffle: Larry Giroux and Dolly Dalton awarded about 10 donated plants to the 14 lucky winners.

Meeting adjourned: 3:10

Respectfully submitted by Alison Ackerman



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This is your Jan-Feb 2023 CBS Newsletter