



July 2016

Vol. 18 No. 7

<http://www.tgcfernsoc.org>

Next Regular Meeting: Sunday, July 17, at 2:00 p. m. – Judson Robinson Jr. Community Center, 2020 Hermann Drive, Houston, TX 77004 - Phone: (713) 284-1994

In Memoriam

Lulu Leonard

We have lost a true plant lover. Begonias were always Lulu's first love and she was a member of all three of the area's Begonia Societies and the National Begonia Society for many years. She served in all areas including President on several occasions. She also loved her ferns but not mounted on a plaque. Her staghorn ferns had to be in a hanging basket. She just did not like the look of a fern on a board.



I was lucky and got to go on a few plant trips with Lulu. We went to Florida to the National Begonia Society show and sale and also to one in Dallas.

But the trip where I had the most fun and remember so well was a fern trip to Florida. Larry Rucker, Erlene Causy, Lulu, my husband Joe, and I went to purchase and package ferns for our society's fern sale. We rented a small condo, a small car, and a box truck. It was a riot of a trip.



We bought lots of ferns, ate really well, and worked our heinies off while laughing the entire time. Lulu was a

ball of energy. Those short little legs could walk you to death.

Lulu never saw a plant she didn't need. Then she would propagate them to share at the raffle tables at her clubs. I have many plants that came from Lulu. I will always think fondly of her when I care for these plants for they are a part of her.

Lulu had traveled the world, literally! She met Erlene back in the '80s and they went on many trips. It was always fun to listen to her many stories of travelling all through Asia and Europe and bringing home plants stuffed in some interesting places. There is no telling how many plants really came back into the U.S. including plumerias from Cambodia. When Erlene passed away, Lulu's zest for international travel dwindled. She never got over the loss of her friend. Erlene had also been a member of the fern society so it was a sad day for us all, just as it is now losing Lulu.

Lulu had a lot of health issues in the past five years or so, but she continued to support her Societies and her love of plants right until the end. She was with us on our last field trip in April. Although she was not able to walk the trails, she was there! Lunch afterwards was

fun too. I wish I had gotten to talk to her more at the May meeting. You never know when you are seeing someone for the last time. I did have one last hug to remember. I will always smile as I remember her and miss her.

She left behind her three sons, siblings, and a lot of friends. She lived her almost 89 years to the fullest and that's all any one of us can hope for.

Darla



A message from our President:

Hi Everyone,

Summer has arrived! With the summer heat our ferns sometimes get a little hot. To help them over summer, make sure they stay medium moist. It is a temptation to over water to help keep them cool. That is not the solution. Give them some more shade if they are burning. If they are planted in the ground and they are getting too much sun, you might try some manmade solutions such as setting other potted plants in front of them to help shade them or even an umbrella.

Joan Hudson gave us yet another wonderful presentation. She really explained gametophytes well, discussing the heart shaped gametophytes as well as the other two less common shapes. She explained the life cycle and answered many questions. Joan also brought us some plums to enjoy. The ones I took were wonderful! Thank you for everything Joan!

July speaker is Adam Black, the new director of Peckerwood Gardens. Adam is a great speaker with a vast knowledge of ferns and many other plants. This will be a wonderful presentation on the ferns of Taiwan. Read more about Adam in the Presentation note. We will be meeting in the back room for the PowerPoint presentation. I am really looking forward to this. I have not been to Taiwan, but I know they have many ferns and I hope to go in the near future.

August is our Summer get together! Party! Party! Larry Rucker has a perfect home for our Social. Getting to know each other better always makes our membership stronger. We are a fern family! It's always hard to get around and talk to everyone at the meetings. This gives us a much better opportunity to talk ferns. Please see Ruth McDonald's article on the party and what we need in the way of food. This year we have a theme! Please get with her on what you would like to bring and let's have a wonderful time.

With all the excitement of last month's presentation, we did not get our refreshment list filled. We really could use a couple more volunteers. I want to thank everyone for stepping up and sharing your culinary experiences with us. This past meeting everyone really stepped up the game on refreshments! Thank you so much!!

Stay cool my friends and don't let this Texas weather wilt you! See you at the meeting

Darla



July 17, 2016 Presentation

Exploring Taiwan's Fern Diversity

For such a relatively small island, Taiwan has a tremendous diversity of pteridophytes, with well over 700 species described and more being discovered regularly. These are scattered in a variety of habitats from tropical rainforests to dry woodlands and all the way up into freezing subalpine zones. Come explore the breathtaking landscapes and exceptionally beautiful examples of ferns, Selaginellas, and clubmosses that Adam has encountered during his three botanizing adventures in Taiwan.

A lifelong plant enthusiast, Adam Black served as horticulturist at Kanapaha Botanical Gardens in Gainesville, FL and more recently managed the forest pathology and forest entomology labs at the University of Florida, while also co-owner of Xenoflora LLC, a rare plant mail order nursery. Adam currently is director of horticulture at Peckerwood Gardens in Hempstead, TX working to transition the formerly private collection of valuable plants from Mexico and beyond into a public botanical garden.



Up and Coming Attractions:

2016:

- July 17: "Exploring Taiwan's Fern Diversity"
by Adam Black
- Aug 21: Summer Party
at Larry Rucker's home
- Sept 18: Annual Plant Swap
- Oct 16: Cheilanthoid ferns
by George Yatskievych, Ph.D.
Botanist, Curator, Plant Resources Center,
University of Texas at Austin
- Nov 20: "Fern Holiday Ornaments"
by Larry Rucker (hands on, cost TBD)
- Dec 11: Holiday Party
at Biruta Claunch's home

Submitted by: Lisa George & Larry Rucker, VPs



Please Welcome Our New Member:

George Yatskievych



Refreshments:

Refreshments for June were generously provided by:

Beth Ayer, Biruta Claunch, Darla Harris, Ruth McDonald, Susan Peacock, Rodolfo Reyes, and Larry Rucker

Refreshments for July will be generously furnished by:

Drinks: Beth Ayer, Rodolfo Reyes
Savory: Darla Harris, Ruth McDonald
Desserts: Beth Ayer, Diane Hudnall, Cherie Lee
Service ware: Ruth McDonald

Please let Raini Cunningham, bnrc@xmission.com / 801-891-2254, or Ruth McDonald, rmmcdonald0@gmail.com / 979-530-6186, know if you can help with the refreshments for any months in 2016. Come out and enjoy some really delicious food!



August Summer Party At Larry Rucker's Home

In August, the summer party will be held chez Larry Rucker, who has come up with the great idea of having a New Orleans theme. Lots of fun ideas for refreshments, and so let's start thinking cool creole.

Remember, everyone brings a dish to share at the party. Please let me know what you plan to bring. Contact information is above and in the directory.

Hope you can all make it.

Submitted by: Ruth McDonald



June Raffle Results:

Thank you to our Donors: Raini & Bret Cunningham, Will Fleming, Darla Harris, Joan Hudson, Jan Kramer, Jim Migliavacca, Donna & Johnny Williams, and Brenda Wilson

Congratulations to the Winners: Beth Ayer, Raini Cunningham, Will Fleming, Darla Harris, Chuck Hudson, Joan Hudson, Joy Hudson, Jan Kramer, Ruth McDonald, Jim Migliavacca, Jacqueline Smith, Donna Williams, and Brenda Wilson



2016 Officers and Committees:

President:	Darla Harris
Vice President:	Lisa George and Larry Rucker
Secretary:	Diane Hudnall
Treasurer:	Mary McConnell
Board Members-at-Large:	Biruta Claunch Terri Dolney Cherie Lee (Past Pres)
Education Chair:	Darla Harris
Hospitality Chair:	Raini Cunningham and Ruth McDonald
Library:	Ruth McDonald
Membership Co-chairs:	Beth Ayer and Marcia Livingston
Newsletter:	Cherie Lee
Spore Exchange:	Patrick Hudnall
Ways and Means:	Larry Rucker - Raffle, Store, etc. Biruta Claunch
Web Master:	Malcolm McCorquodale
Welcoming at Door:	Beth Ayer and Marcia Livingston



July Book Review

Favorite Fern Books and Web Sites

Please send the names of your favorite fern references - books or web sites - to Ruth McDonald rmmcdonald0@gmail.com. The resources can be general or specialized. Your recommendations will appear in the August newsletter.

Submitted by: Ruth McDonald



**Texas Gulf Coast Fern society
General Meeting
June 19, 2016**

The general meeting was held at the Judson Robinson Jr. Community Center, Houston, Texas. The meeting was called to order at 2:00 pm by President Darla Harris.

General: Darla opened the meeting by noting the talk for next month will be on Ferns of Taiwan by Adam Black, the director of horticulture at the Peckerwood Gardens. Darla also announced that the summer party will be at Larry Rucker's house in two months.

The June Newsletter did not go out on time this month because of issues with Cherie Lee's computer. It is expected to be completed within the next few weeks.

Program: Joan Hudson with Sam Houston State University in Huntsville presented on Fern Gametophyte Growth and Development. She teaches botany, cell biology and biology. She brought 6 microscopes for viewing.

Attendance: 30 members attended

Raffle: \$84.00

Submitted by:
Diane J. Hudnall, secretary



2016 Dues

If you have not renewed your membership for 2016, please complete the membership form and return it with your payment and any changes noted to our Membership Co-chairs Beth Ayer and Marcia Livingston at our next meeting or mail it to:

Beth Ayer
5815 Portal Drive
Houston, TX 77096

TGCFS dues amounts:

Individual: \$10.00
Family: \$15.00
Student: \$ 5.00

Please make your checks payable to Texas Gulf Coast Fern Society or simply TGCFS.



**Statement of Income & Expenses
April 1, 2016 to June 30, 2016**

INCOME

Membership dues	\$ 150.00
Raffle Income	102.00
Bank Interest	<u>0.66</u>
Total:	\$ 252.66

EXPENSES

Speaker	\$ 170.00
Field Trip	90.00
Federation Dues	<u>30.00</u>
Total:	\$ 290.00

Balance 12-31-2015: **\$8,646.75**

Balance 3-31-2016: **\$8,802.42**

Balance 6-30-2016: **\$8,765.08**

Net Gain Loss for 2nd Qtr: **\$ (37.34)**

Net Gain Loss for 2016: **\$ 118.33**

Submitted by: Mary McConnell, Treasurer



Library

We encourage you to take advantage of the great resource of information available in our library. At each meeting there are a wide variety of books available for immediate checkout. Don't forget to visit our web site (see link in header, page 1) and click on **Library** to see the current list of books available. There you will see some pictures of the books we have and links to reviews at Amazon and elsewhere. If there is a particular book you would like to check out at the meeting, please contact Ruth McDonald at rmmcdonald0@gmail.com or 979-530-6186 prior to the meeting to make sure it will be available.



Editor's Comments

Deadline for the August Newsletter is August 1, 2016. Thanks.

Cherie Lee, Editor, *TGCFS Newsletter*



Azolla Mosquito ferns

Class: [Polypodiopsida](#)

Order: [Salviniales](#)

Family: [Salviniaceae](#)

Genus: *Azolla*

A Texas native *Azolla* is a water fern that can be found worldwide. It is the smallest fern and yet has the highest economic value of all the ferns. Why? It has the ability to capture all the nitrogen fertilizer it needs to grow from the air around it. *Azolla* fixes nitrogen, improves the soil, and provides a natural fertilizer to bolster rice productivity. It has been used in the rice fields of Asia for years for its rich nitrogen.

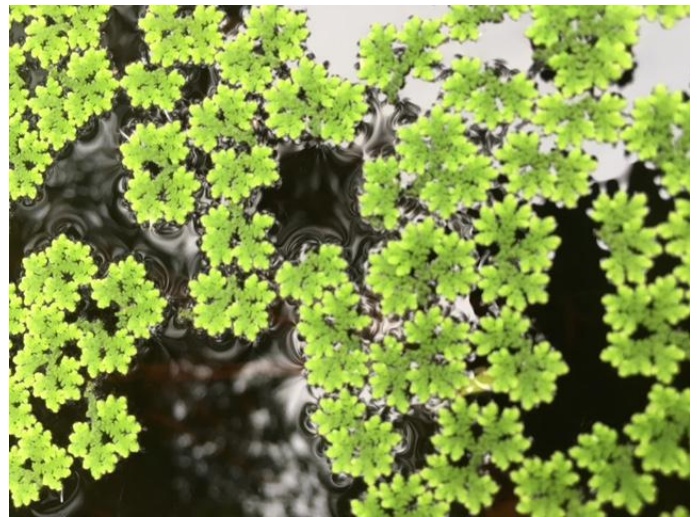
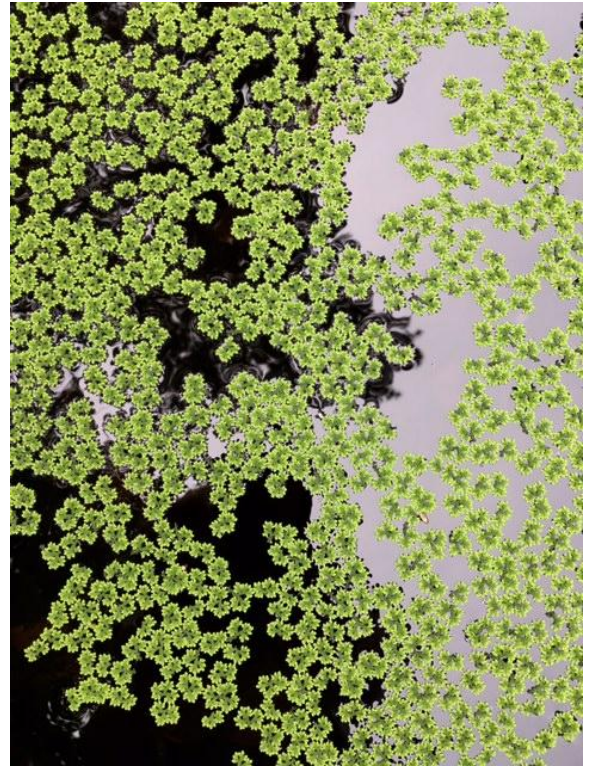
The *Azolla* event happened some 50 million years ago. According to science, the earth was in the middle of a heat wave and was a giant greenhouse. The north-pole and the area around Greenland and Iceland had fresh water and it was covered with *Azolla*. Fossil evidence indicates that as the *Azolla* died it sank to the bottom of the now Atlantic Ocean and what it did next is amazing. Global atmospheric levels of CO₂ fell significantly, precipitating Earth's initial shift from a greenhouse world towards the current icehouse climate that we're now worried will melt.

There are seven different *Azolla* worldwide. Here in the U.S. we have mostly *A. mexicana* and *A. caroliniana*. It is nearly impossible to distinguish between them without an X40 power lens. It literally comes down to counting hairs and looking at the spore themselves.

Azolla can double its size every two days. Grows in fresh water or surrounding mud, needs full sun, and can cover a pond in a short time. This is how it got its common name because it helps prevent mosquitos from laying their eggs or the larva to break the surface.

Not only is *Azolla* a promising alternative for biofuel production and carbon-capture efforts, it also hosts a microbe called *Nostoc* that converts atmospheric nitrogen into food for its host plant.

This fern is a super organism with superpowers.



Submitted by: Darla Harris



Upcoming Events in the Houston Area:

If you have the time and would like to expand your horticultural activities, take note of the following announcements.

The Houston Orchid Society, Inc.

– www.houstonorchidsociety.org –

Regular meetings are held the first Thursday of every month at 7:30 PM at the First Christian Church, 1601 Sunset Blvd., Houston, TX 77005

Next regular meetings are:
July 7, 2016 and August 4, 2016

Bromeliad Society/Houston Inc.

– www.bromeliadsocietyhouston.org –

Regular meetings are held the third Tuesday of every month at 7:30 PM at the West Gray Multi-Service Center 1475 W. Gray St., Houston, TX 77019

Next regular meeting is:
July 19, 2016

“Fern Gametophyte Growth & Development”

by Joan Hudson



Joan Hudson

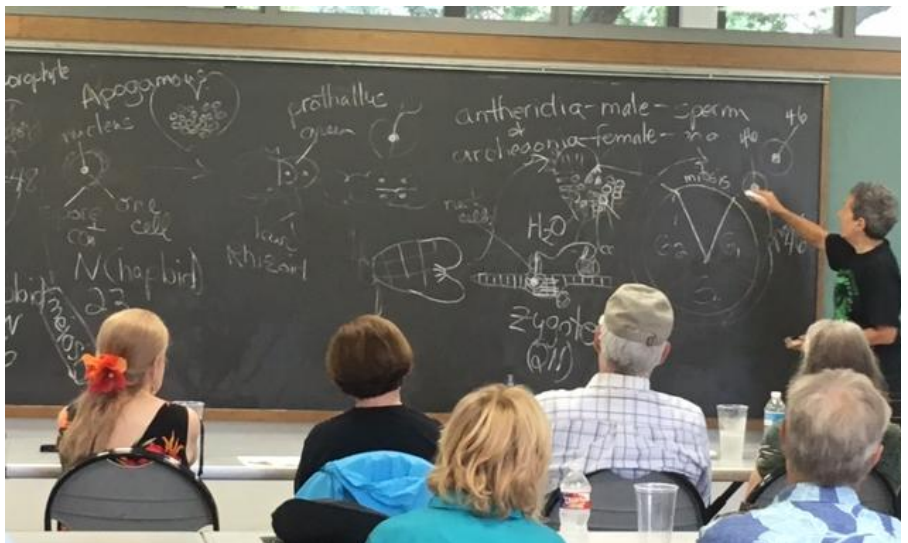


Photo courtesy of Darla Harris



Photos courtesy of Bret Cunningham



Photo courtesy of Darla Harris

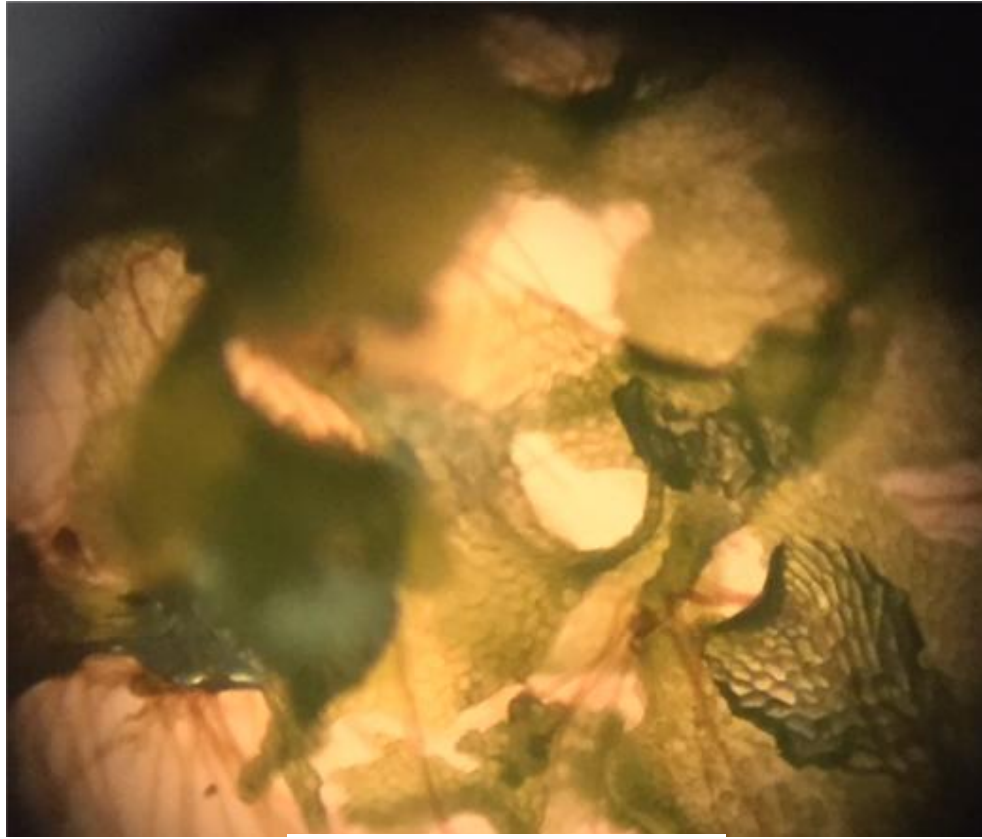
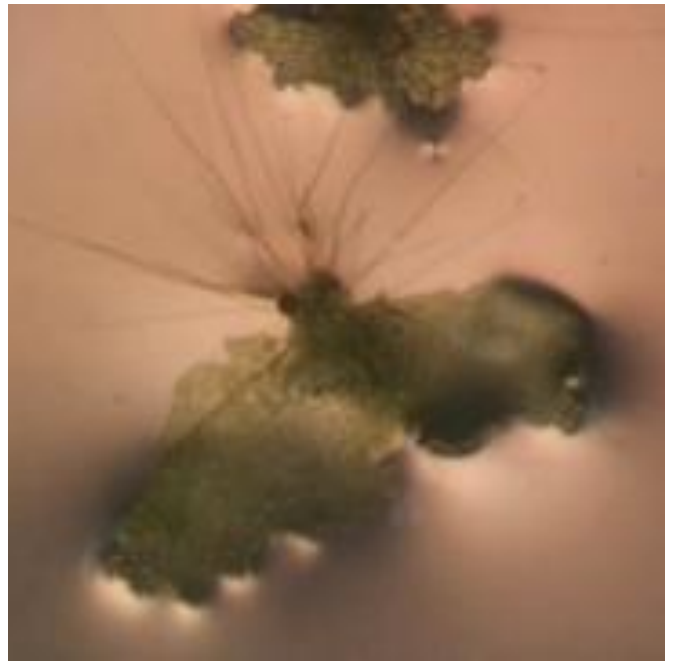
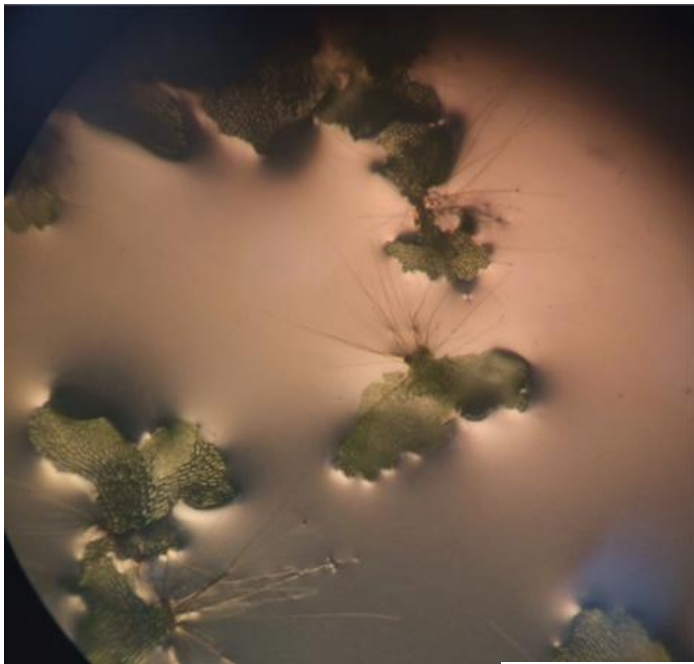


Photo courtesy of Bret Cunningham



Photos courtesy of Patrick Hudnall