



Texas Gulf Coast Fern Society

June 2011

Vol. 13, No. 6

<http://www.tgcfersoc.org>

**Next Regular Meeting: Saturday, June 18, at 11:00 a. m. – Mercer Arboretum & Botanic Gardens,
22306 Aldine Westfield Rd, Humble, TX 77338 – Phone: (281) 443-8731**

A message from our President:

Hi Everyone,

Don't forget this month's meeting is Saturday the 18th of June, the day before Father's Day, at Mercer Arboretum. It starts at an early time too, 11 AM. This is a big change from our normal meeting time and place.

I would like to thank Ted Richardson for following up for us on the parking tickets. That was a surprise, and not a pleasant one, but the Garden Center got it all fixed for us. Other than the parking issue, the meeting was very enjoyable and the two new Davallias will be a nice addition to everyone's collection and the vertical garden should be a nice change to the normal hanging basket.

With our lack of rain and the humidity being so low, I'm sure everyone is watering more and wondering how to keep some of those fine leafed ferns from frying. Short of having an automated system that is going on and off all day to cool them and keep the air moist which would be an ideal set up, most of us have to resort to other methods. Keeping potted plants over saucers with pebbles and water in them will help, but for those hanging baskets, it is harder to keep them happy. You might try clear plastic wrap on your moss baskets to help retain some of the moisture, but keep a drain hole so you don't drown the plant. This should keep the moss wet a little longer. I have been putting the little water stakes in other plants, too. We need rain!!!

I'm excited about getting some much needed information on soils. I'm really looking forward to learning more, and this meeting should be the ticket! See you there!

Darla



A message from our Vice President:

Moving Soil

**SATURDAY, JUNE 18, 2011
11am at MERCER ARBORETUM**

This seems like an odd title for this month's program, but it isn't. Our speaker, John Ferguson, will be speaking on the Soil Food Web. The way microbes move through the soil, or when

they cannot move through the soil, has been a recent fascination of mine. I marvel at those tiny fungi and bacteria, how they interact with their environment, and in a symbiotic relationship with nematodes, worms, ants, and a hundred other living organisms, make up the soil food web. The end result is a living "soil". In nature, when given the opportunity, this happens without any help from humans. But when we plant, garden, or walk on the soil, we frustrate what nature does without our "help".

We test the soil. We add fertilizers to correct nutritional deficiencies, dig into the soil to break up the clay, water, water, all the while destroying the very thing we are trying to "help". When I read "Teaming with Microbes" written by Jeff Lowenfels and Wayne Lewis, I started to look at my soil differently. Instead of adding fertilizers, organic or "Miracle Grow", I began looking at feeding the micros which support the necessary growth for my plants. Perennials prefer their nitrogen in the form of ammonium-acidic based fungal soil. Annuals, including lawns, on the other hand, prefer their nitrogen in the form of nitrate from bacteria. Who knew?

John Ferguson is a champion for the soil food web and he is going to share with us his experience and knowledge of the Soil Food Web. John is the owner of Nature's Way Resources in Conroe. Visit his web site at www.natureswayresources.com for a fascinating tour of their history, mission statement, and products, much too lengthy to reprint in the newsletter. He will talk about the incredible diversity of organisms which make up the soil food web and how this food web "moves the soil" which makes it possible to have clean air, clean water, healthy plants, and moderated water flow.

I have arranged for our members to have VIP status for parking. Given the current parking nightmare here in Houston, I wanted to find out what parking alternatives there were to foil the possible torture of having to park across the street and balancing refreshments, bags, or books. You can still park out front, come in through the main entrance and go to the Visitors' Center lecture room OR see the map at the end of this newsletter for easy access to the back of the Visitors' Center. This will make unloading and reloading easier.

Also, due to Mercer's policy, our usual raffle, or even having our customary "plant of the month", is a NO GO. Thus, do not bring plants for the raffle as there will not be one. And there also will be no plant of the month. In case you missed it- **NO PLANTS!!!!** at this meeting.

I'm looking forward to this presentation on the Soil Food Web. I hope you are too.

Submitted by: Jessica Sheldon, Vice President



Refreshments:

Refreshments for May were generously furnished by:

Drinks:	Cecil Strange
Savory:	Noreen Tolman
Fruits/Veggies:	Terri Dolney
Desserts:	Mary McConnell
Service ware:	Martha Burg

Refreshments for June will be generously furnished by:

Drinks:	Ted Richardson
Savory:	Faye Stansberry & Mary McConnell
Fruits/Veggies:	Jean Richardson & Mary
Desserts:	Marcia Livingston & Larry Rucker
Service ware:	Society

Please let Jean Richardson know if you can help with the refreshments for future months. <mailto:tedandjean@aol.com>. Come out and enjoy some really delicious food!



Up and Coming Attractions

June 18, 2011 Meeting at Mercer Arboretum

We are having our June meeting on **SATURDAY at 11:00 AM**. Our speaker, John Ferguson, will be presenting a program on the "Soil Food Web". Mercer is including this program on their calendar as an open invitation meeting hosted by the Texas Gulf Coast Fern Society. Please try to arrive early, especially if you have signed up for refreshments, so we will be prepared to start the presentation promptly at 11 AM since we may have more visitors than usual attending. Thanks.

- July 17: 'Nephrolepis-Boston Ferns' by Duane Peterson
Plans to bring about 15 different ferns to show
- August 21: Summer Party at Mary McConnell's home
- Sept 18: Annual Plant Exchange – get those plants growing and potted before the Sept meeting
- October 16: Open
- November 20: Open
- December 18: Christmas Party with gift exchange

Submitted by: Jessica Sheldon, Vice President



Welcome New Member

Melissa Doucet

Please welcome her at our next meeting.

Submitted by: Mary McConnell, Membership Chair



2011 Officers and Committees:

- | | |
|-------------------------|--|
| President: | Darla Harris |
| Vice President: | Jessica Sheldon |
| Secretary: | Cherie Lee |
| Treasurer: | Terri Dolney |
| Board Members at Large: | Marcia Livingston, Donna McGraw,
and Lulu Leonard |
| Membership Chair: | Mary McConnell |
| Ways and Means: | Ted Richardson |
| Special Projects: | Larry Rucker |
| Web Master: | Malcolm McCorquodale |
| Newsletter: | Cherie Lee |
| Library: | Frank Lee |
| Raffles: | Larry Rucker |
| Spore Exchange: | Patrick Hudnall |
| Society Store: | Larry Rucker |
| Hospitality: | Jean Richardson |
| Welcoming at Door: | Beth Ayer and Marcia Livingston |

2011 Dues:

2011 dues are now being accepted. If you haven't paid for 2011, please complete the membership form and return it with your payment to our Treasurer Terri Dolney or our Membership Chair Mary McConnell at our next meeting or mail it to:

Mary McConnell
6218 Wister Lane
Houston, TX 77008

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.

If you have not paid your dues by June 2011, you will no longer be considered an active member of the TGCFS and you will no longer receive the monthly newsletter.





At the recent Seeley Conference, a presentation was made recommending a ban on the harvest of peat moss and its use in horticulture. This concept has been hotly debated in Europe over the past 20 years and rightly so. The European debate is greatly influenced by two major issues:

- 1) Historically, the predominant use for peat in northern Europe is for fuel in lieu of oil or coal, and
- 2) The draining of bogs and wetlands for peat harvest and agriculture threatens critical habitats for migratory birds. These are two very hot topics within the environmental and conservation movements. It was only a matter of time before these issues arose in North America, as well. However, the situation as it relates to the U.S. horticultural industry is distinctly different.

The importance of peat

In England, more than 90 percent of the bogs have been damaged or destroyed, and in Germany and the Netherlands, few peatlands remain in their original condition. Compromises were made allowing the remaining bogs and wetlands to be purchased and set aside as conservation sites and reclaimed in these countries. Ireland closely regulates the harvest of peat for fuel and horticulture and has established a national peatland conservation program.

Canada is a major supplier of horticultural peat in the world, with exports to Asia, Africa and the Americas. It has more than 270 million acres of peatlands, of which only 40,000 acres (one acre in 6,000 or 0.02%) are used for peat harvesting. In comparison, more than 49 million acres of Canadian peatland (18%) have been permanently converted to agricultural, industrial or urban uses. Approximately 95 percent of the peat harvested in Canada is used in the horticultural industry.

Peat moss was first used in the United States as a fuel source and as bedding material for horses, chickens and other animals. After World War II, peat became a major player in the

horticultural industry as a soil amendment and component in the greenhouse industry. Initially, the greatest demand for peat was as a soil amendment for gardening and landscaping to loosen heavy soils and increase water and nutrient retention in sandy soils. This market grew dramatically with increases in suburban housing, athletic fields and golf courses. Peat moss was and still is an ideal source of organic matter—it's light, clean and free of weeds and diseases. And because of its spongy characteristic, it can be compressed by a factor of two and transported long distances by truck or container. Due to these attributes and relatively cheap transportation costs, Canadian peat moss was often preferred over local sources of peat and other organic materials in the United States.

The pendulum is swinging the other direction today in regards to peat being used in the gardening and landscape industry. Now most soil amendments in garden centers are primarily bark and recycled or composted yard wastes, with very little peat. They are heavier, locally available, regionally blended and relatively cheap. Their value is that they provide an aggregate for loosening the soil, and they provide organic matter to support biological activity in the soil. Many states and communities have mandated that these waste products be removed from waste streams and landfills and used in recycling efforts. Peat moss continues to be a superior soil conditioner, but there are adequate alternatives in many parts of the country.

In the late 1960s, Cornell's "Peat-Lite" potting mixes were introduced to our industry for container production. Dr. John Seeley referred to the era prior to this as "BP" (before plastic). Plastic greenhouse coverings reduced the start-up costs for entering our industry. Lightweight plastic pots, trays and baskets expanded a grower's offerings and encouraged regional production for faraway markets. A thriving economy, fueled by the Baby Boom generation, increased the demand for container-grown plants and growing media throughout the United States. Our industry prospered during these times, evolving from mineral soil-based mixes to peat-based mixes and growing crops faster and better than before. A number of factors accounted for our phenomenal growth in the latter half of the 20th century. And just as in Europe, the floricultural industry grew in peat-based media.

Why peat moss?

What's so special about peat moss? There are many reasons: 1) Peat is readily available in North America; 2) it's conducive to mechanized harvest; 3) it's easily processed, screened and packaged; 4) it can be palletized; 5) it optimizes weight to volume for economical trucking; and 6) it can be stored for a year or more with no noticeable change in properties.

These are the industrial reasons why peat moss is so highly regarded, the criteria that all other media components are compared to in regards to cost and utilization. Literally, peat is harvested like hay, cleaned like grain, shipped like hardgoods and used as needed onsite. For comparison, the same volume of peat moss can be shipped six times farther for the same transportation cost as a bulk load of pine bark or compost.

The horticultural properties of peat moss are what really provide added value to the production of container-grown crops. There are over 300 species of sphagnum in the world. They modify the ecology by covering wetlands and shallow lakes. The

leaves and stems float on the surface of the water. As the unspecialized cells die, they sink to the bottom and form peat deposits under anaerobic conditions. In nature, 1 to 2 mm of peat accumulates each year to ultimately form a peat bog.

The horticultural value of peat moss is due to the unique properties of the sphagnum cells. The sole purpose of these thin-walled cells with large cavities is to absorb and transport water. An important characteristic is the cells' lignified walls, built in the form of rings, spirals or plates that prevent them from collapsing when they become dry. This property continues long after the plant dies and forms the peat that we harvest. As water evaporates from the cells, air fills the pore because the thickened walls do not collapse. As long as the peat is suitably moist, optimum conditions of moisture and aeration can be maintained for plant growth. This capability to absorb and transport water up to a height of 18 inches is a very simple capillary system.

Another property of sphagnum cells is that they are "surface active," meaning they can absorb water as well as nutrients; because they are single cells, there's a lot of surface area for absorption to occur. These nutrients are readily given up for absorption by the plant roots. Other organic sources require composting before they can perform in a similar fashion, so this attribute is important in the discussion of sustainability, as the use of peat moss improves the efficiency of both water and fertilizer use in crop production.

Container production is the heart of our floral industry. We grow in them. We transport them to our customers. We even use them in our marketing programs. However, containers present a specific challenge for growing media. Good, fertile field soil performs poorly in a container because its fine particles provide only small pores for the exchange of air and water. Field soil relies upon the uninterrupted pull of gravity to pull air into the root zone. The bottom of a pot or flat disrupts the gravitational pull on the water column in the container. We refer to this phenomenon as a "perched water table". When the mix in the pot is thoroughly wetted, there is a moisture gradient, with the bottom being saturated and the surface being moist. Pores in the growing medium hold either water or air at any given time. In the above situation, there is an inverse gradient for air in the mix. There's more air at the surface than at the bottom of the container. The substrate relies upon the capillary movement of water against the force of gravity to introduce air back into a saturated container. When comparing components for growing media, these physical properties are very important.

Peat moss readily exchanges air for water and water for air within the confines of a container. Other fibrous (sedge peat, rock wool, etc.) or granular products (perlite, coir, etc.) may absorb water like a blotter but do not provide the air exchange and capillary movement as peat does. Aggregates, like bark, may adsorb water on the surface, but they don't improve water availability to the plant.

There are plenty of reasons why peat is the perfect horticultural element. And though desire for horticultural peat is strong—total revenues in 1999 were approximately \$170 million Canadian) and the industry employed thousands of residents in rural areas of Canada—peat is accumulating over 70 times faster each year in Canada than it's being harvested. In addition, the Canadian Sphagnum Peat Moss Association (CSPMA) carefully monitors these peatlands, actively endorsing and participating in

preservation programs and the restoration or reclamation of harvested sites.

It's important to note that Fafard and many other companies harvesting peat moss in Canada are members of the CSPMA.

Peat moss is classified as a slowly renewable resource that is being replaced more rapidly than it's being harvested in Canada. It's valued as an important component to the livelihood of many commercial growers and the satisfaction of millions of home gardeners. No other component performs as well or at a comparable cost. It's clear that peat is a precious asset. And like any treasure, it's one that should be protected for long-term availability. **GT**

Hugh A. Poole is director of technical services and Jaime L. Gibson is director of research and development for Conrad Fafard, Inc. in Anderson, South Carolina.

Submitted by: Patrick Hudnall



Mercer Arboretum & Botanic Gardens

www.hcp4.net/mercer

Texas Gulf Coast Fern Society Meeting: The Soil Food Web

Sat., June 18, 11 a.m.-2 p.m.

From 11 a.m. to 1 p.m., John Ferguson, owner of Nature's Way Resources, introduces participants to an incredible diversity of organisms that make up the soil food web. The soil food web is the community of organisms living all or part of their lives in the soil, and how this living system interacts with the environment, plants and animals. These organisms range in size from the tiniest one-celled bacteria, algae, and fungi, to the visible earthworms, insects, and plants. As these organisms eat, grow, and move through the soil, they make it possible to have clean water, clean air, healthy plants, and moderated water flow. The Fern Society's meeting continues until 2 p.m. where you can learn about ferns for Houston gardens. Members, non-members, and the public are invited to enjoy this program.

Orchids and Tropical Workshop

Sat., July 23, 9 a.m.- 3 p.m.

Sign-up now for this one-day workshop that focuses on lush and exotic plants. The day's activities include speakers, a plant sale, and garden tour. The tour focuses on the plants that survived the winter freeze in Mercer's tropical garden and that are well-suited to tropical landscapes. The workshop fee provides lunch, admission to the talks and sale, handouts, and the garden tour. Space is limited to 50 participants and registration is required. TMS members \$60; non-members \$75.



Platycerium superbum

Genus: [Platycerium](#) (plat-ee-SIR-ee-um)

Species: [superbum](#) (soo-PER-bum)

Platycerium superbum is a large non-pupping fern from the Malayan-Asiatic species and is native to Australia. Superbum grows to be 3-6 foot across and likes to be on the dry side. I have found that superbum does well on cork to keep it from getting over watered at least while it is young. Then, it needs to be moved to something that will support its large size and can weigh up to 100 lbs when full grown.



Photograph from Barbara Joe Hoshizaki's Yard

Superbum grows well from spore, but it takes two to three years to get your first foliage fronds and then the next year for the spore patch. The spore patch is found under the frond and is covered with a cinnamon colored layer of plant skin that protects the spore. You have to scrape down through this layer to get to your viable spore.



Photograph from the Lee's Yard

For me, superbum grows very slow for the first year or so, having only the round shield frond for several months to a year before putting on wing-like spread on the shield. After about three years you get your first fronds. You can't help but smile once you get your first fronds, because you do have to wait awhile if you start with a young plant.

Superbum can take a frost and go down to the upper 20's for short periods of time. So with some light protection and normal winters for us, it should do well outside here in Houston.

This staghorn is certainly not a super bum...



Photograph from Barbara Joe Hoshizaki's Yard



Photograph from the Lee's Yard

Submitted by: Darla Harris



**Minutes of General Meeting, May 15, 2011
Texas Gulf Coast Fern Society**

A regular monthly meeting was held at the Houston Garden Center, Houston, Texas. The meeting commenced at 2:00 PM with President, Darla Harris calling the meeting to order.

Membership: Chair Mary McConnell informed the members that the 2011 Membership Directory was now available and to pick up a copy at the meeting.

Hospitality: Chair Jean Richardson reminded everyone to please sign up to bring refreshments for upcoming months.

Library: Substitute Chair Cherie Lee reminded all that the Library was open for checking out books and to please return books at the next meeting.

Society Store: Chair Larry Rucker informed members that there were several very nice plants available for sale from the store. (Plants donated by Larry – Many thanks from us all.)

Upcoming Programs/Meetings: VP Jessica Sheldon announced that the June meeting would be on Saturday June 18th at Mercer Arboretum starting at 11 AM. This is an open invitation meeting being advertised in the Mercer Newsletter and on their website. See Mercer advertisement included in our Newsletter. Please try to be there early, especially if you have signed up for refreshments, so we will be prepared to start promptly at 11 AM. Our general TGCFS business meeting will follow the presentation at about 1 PM.

External Presentations: Our own Darla Harris will be presenting a program on Ferns at the Mercer Arboretum “Orchids and Tropical Workshop” on Saturday, July 23rd. See the Mercer advertisement included in the Newsletter for additional information on the workshop.

Program: Jessica Sheldon presented a very interesting program and workshop on “Vertical Gardening”. Workshop kits including a vertical planter, moss, and two varieties of Davallia were available for purchase. The plants were Davallia penraphylla ‘Possum Tail Fern’ and Davallia fejeensis ‘Lacy Hare’s Foot Fern’. It was a very enjoyable meeting. Pictures are included in the Newsletter.

Plant Raffle: Larry Rucker ran the plant raffle with many plants finding new homes.

Meeting was adjourned at 4:00 PM.

Submitted by: Cherie Lee, Secretary



Library

We encourage you to take advantage of the great resource of information available in our library. At each meeting there are take-home sheets that contain a brief review of available books. Also at each meeting, there is a wide variety of books and videos 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.



June Book Review

“Encyclopedia of Ferns” by David L. Jones

This book contains seven sections: an introduction to the structure and botany of ferns; cultural requirements; pests, diseases and other problems; propagation and hybridization; specialized culture, repotting, containers and housing; species to grow; and lists of ferns for various purposes. Line drawings, black-and-white and color photographs enhance the text and there is a comprehensive glossary of terms. The book is aimed at amateur and professional growers.

Submitted by: Frank Lee



Editor’s Comments:

As most of you are aware, the Newsletter is posted on the TGCFS website at the same time as it is mailed out to the members. In an effort to save money on mailings, it has been suggested that email notification be sent that the Newsletter has been posted on the website instead of mailing the Newsletter. Members can then visit the website to view the Newsletter and print it for themselves if they wish. **If you have not done so already, please let me know if you are willing to accept the email notification and forgo the mailed Newsletter.** You can contact me by calling 281-999-8368, emailing cherie.d.lee@sbcglobal.net, or let me know at the next meeting.

If I don’t hear from you, you will continue to receive the Newsletter as usual. Thanks.

Deadline for the July Newsletter is July 1, 2011.

Cherie Lee, Editor, *TGCFS Newsletter*



Upcoming Events – Other Societies in Houston Area:

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

Bromeliad Society/Houston Inc.
www.bromeliadsocietyhouston.org

Regular meetings are held the third Tuesday of every month at 7:30 PM at the Houston Garden Center.

Next regular meeting is July 19, 2011.

The Houston Orchid Society, Inc.
www.houstonorchidsociety.org

Regular meetings are held the first Thursday of every month at 7:30 PM at the Houston Garden Center.

Next regular meetings are July 7, 2011.



May 15, 2011 TGCFS Meeting

Vertical Gardens

Presented by Jessica Sheldon



Supplies



Davallia fejeensis 'Lacy Hare's Foot Fern'



Davallia pentaphylla 'Possum Tail Fern'



Marcia Livingston (with Cecil Strange's help) with her vertical gardens from our November 2009 workshop



Faye Stansberry constructing her vertical garden

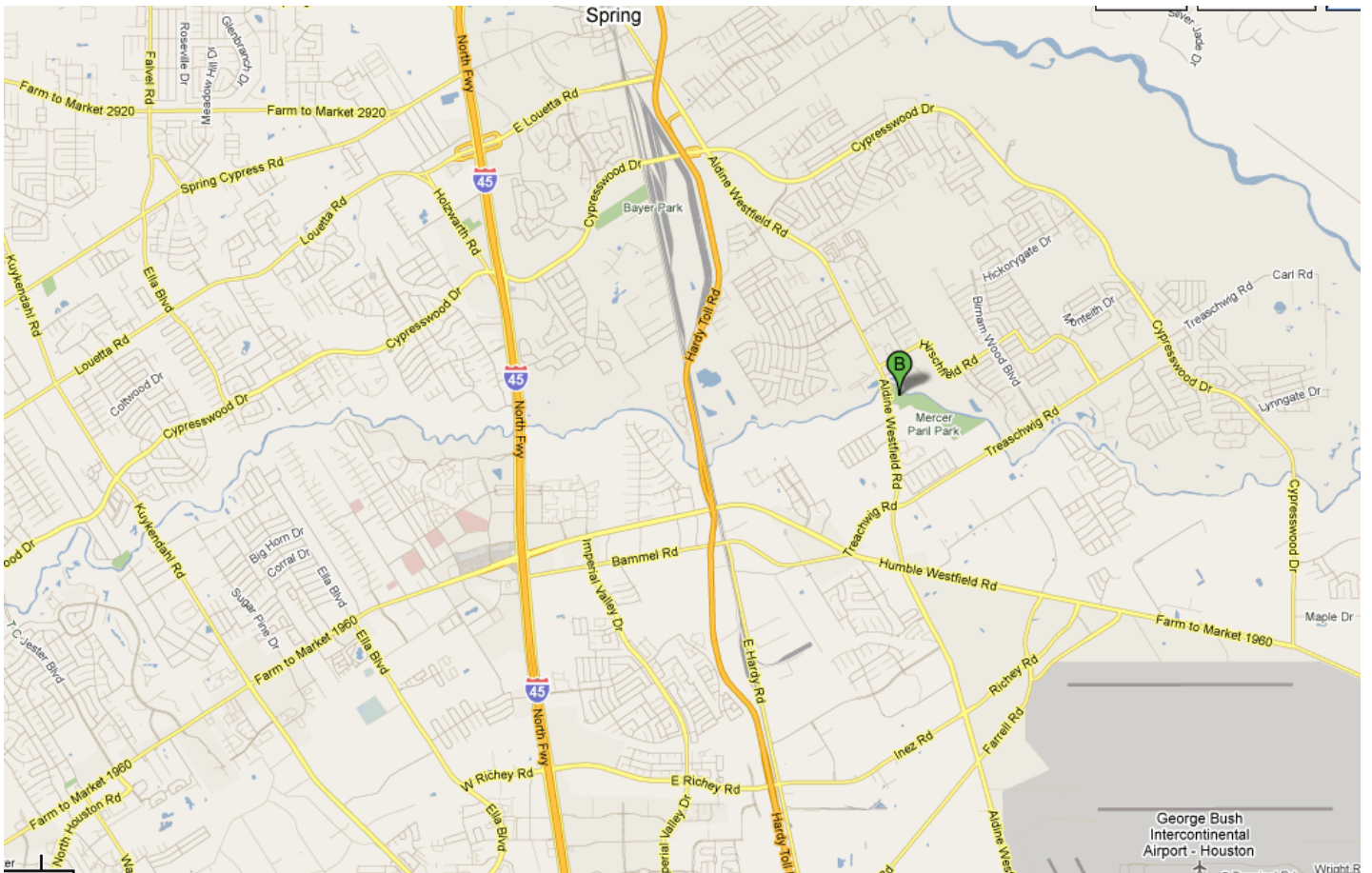
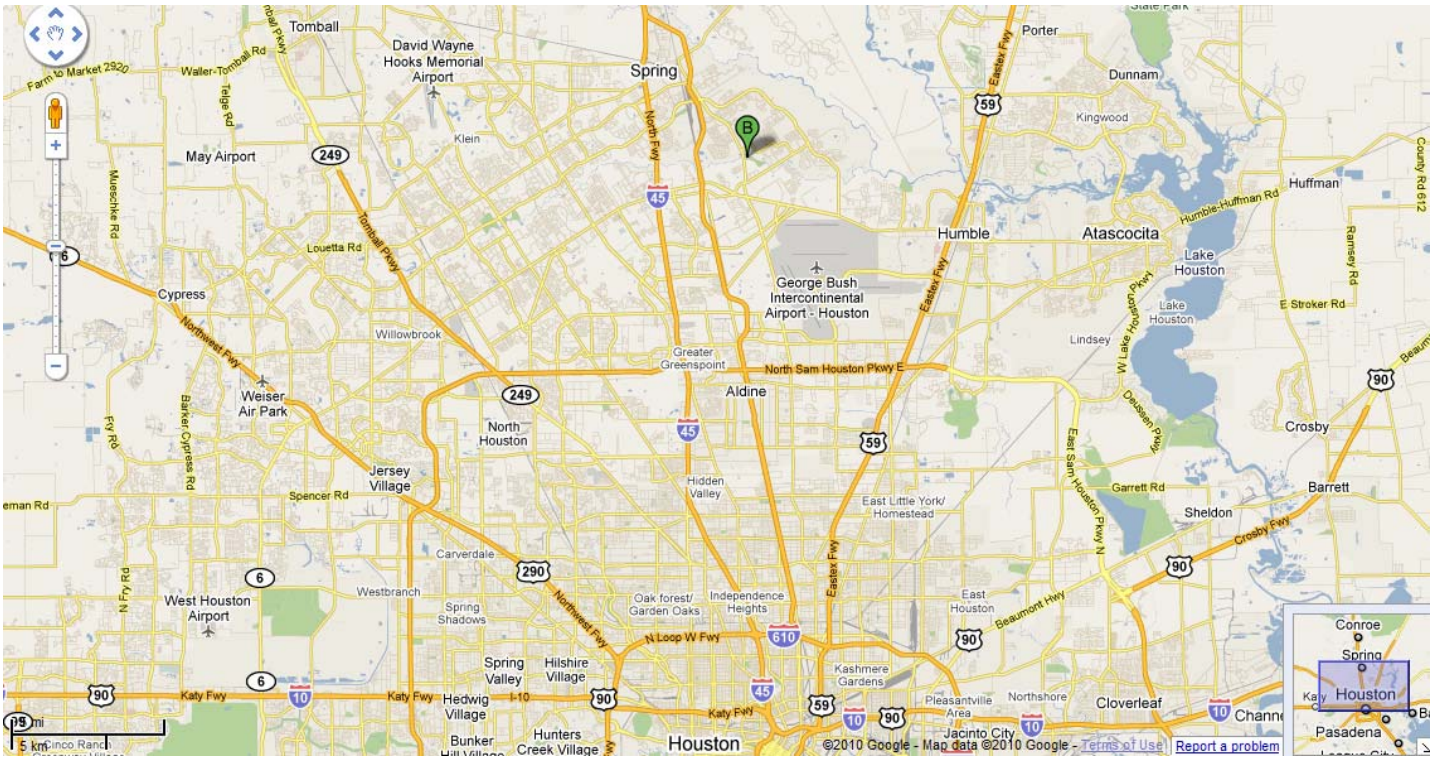


Darla Harris and Ted Richardson playing tug-of-war?



Lucy Melara with her new completed vertical garden

Mercer Arboretum & Botanic Gardens
22306 Aldine Westfield Rd, Humble, TX 77338 – Phone: (281) 443-8731



Mercer Arboretum & Botanic Gardens' Parking



You have the option to park out in front and walk through the main entrance into the arboretum or you may park in the VIP parking lot that is actually the employee parking. To get to the VIP parking, do not curve to the left after entering the main gate but stay almost straight and drive through the library parking located on the right side of the library building. At the far end of the library parking lot there is a tall gate to the employee parking. Go through the gate and pull up to the carport. (Follow the red line on the map.) There will be an open wooden gate to the right close to the carport and occasionally people wander through the gate, so don't run over anyone who unexpectedly walks into the parking area. We will be parking like at the Garden Center, one behind another when the obvious spaces nearest to the back door to the Visitor Center are filled up. As they fill up there is still lots of parking on the right side of the driveway. It is covered with black landscape fabric but it is OK to park on the fabric, but use caution because there are tall, at least 3 feet high, sprinkler heads which you do not want to drive over. The back door to the Visitor Center is under the car port. Push the button on the door handle as you open the door. Once inside, there is a short walk down a hallway then turn right. There is another door with a similar type handle as the outside door. Push the button on the door handle as you open the door to get through to the visitor center meeting room.