the Leaflet

Our mission is to conserve our natural heritage by deepening our knowledge of the plant world and achieving public understanding of the value plants bring to life.

Get Involved

The Story of BRIT: A Botanical Experiment in Herbaria and Library Collections

Mark your calendars for a special Brown Bag presentation on Tuesday, October 3 from noon -1 p.m. Barney Lipscomb will be discussing one of our favorite subjects in the BRIT Commons.

Barney Lipscomb is Head of BRIT Press, Dorothea Leonhardt Chair of Texas Botany, and one of the original staff members of BRIT. Although BRIT is 30 years old, the institution has been reinventing itself for 74 years.

BRIT is an amazing story of how dedicated botanists acquired and developed botanical collections for teaching and research and how these collections moved from obscurity to the public spotlight. Yet, few people are aware of the botanical treasures and priceless gems that lie behind a nearly windowless Archive Block of precast concrete panels. The two-story 20,000-square-foot climate controlled storage hall is home to the “hidden” gardens of BRIT, the herbarium, an international research collection of nearly 1.5 million dried plant specimens, and clandestine library, a worldwide collection of botanical and horticultural literature, with about 100,000 volumes of books, journals, collections of original artworks, manuscripts, photographs, and other archival materials, dating back to the 16th century. BRIT’s hidden garden collections and research projects are used in our education and conservation efforts.

For more information, please contact Alyssa Young at 817.546.1959.

Click on image to go to registration page, or for more information, please contact Kimberly Whitlock at 817.546.1958.

Adult Education

At BRIT, we're firm believers in the idea that knowledge has impact only when shared which is why we're so excited about Adult Education at BRIT. Our instructors are experts in their fields with a passion for sharing their knowledge with you. Won't you join us for one of the remaining 2017 classes? 2018 classes will be announced soon!

* Urban Gardening: Permaculture for Small Spaces - Saturday, October 7, 10 a.m.– noon
* Seed Starting 101 - Saturday, October 7, 1 p.m.–3 p.m.
* Know your Natives: Native American Plant Use - Saturday, October 7, 1–3 p.m.
* Worm Composting - Saturday, November 4, 10 a.m. - noon
* Grasses: The Rodney Dangerfield of the Vascular Plant World - Saturday, November 4, 1–3 p.m.

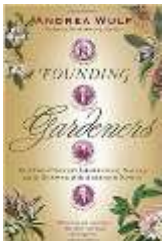
For more information contact Laura Venhaus at 817.546.1844, or visit Workshops and TERM Events.

Bat Box Fest - October 7

Texas Christian University and the Boy Scouts of America have teamed up to offer bat houses to residents of Fort Worth. The event will be held at BRIT on October 7 from 10 a.m. - 12 p.m. Dr. Victoria Bennett from TCU will be on hand to recommend the perfect bat house and where to place it to best attract these flying mammals. In addition, information on how to build your own bat house will be provided. This is a first come first serve event. See you on October 7 at BRIT!

For more information, please contact Tracy Friday at 817.546.8693.

Engage Your Brain with BRIT Reads Book Club!



Are you a bookworm, gardener, or history buff? Are you a magical combination of all three? If you answered yes to either of these questions, please join us on Monday, October 16 as the BRIT Reads Book Club meets to discuss *Founding Gardeners: The revolutionary generation, nature, and the shaping of the American nation* by Andrea Wulf. This book which has been called "engaging" and "lavishly researched" is sure to provide a great jumping off point for all sorts of lively conversations. For more information, please contact Laura Venhaus at 817.546.1844 or visit our webpage.

Sip and Walk: Bubbling Cauldrons and Ghastly Plants - October 19

Join us on October 19 from 5:30 to 7 p.m. Peek inside the fiery cauldron of BRIT botanist and messenger of death, Barney Lipscomb, and discover the mysteriousness and mischievousness of plants past and present. Mr. Lipscomb will take you on a face-paced, multimedia journey through cultural, historical, and mythological aspects of poisonous plants. For more information, please contact **Sara Richardson** at 817.332.2748.

Costumes Encouraged!

For more information, please contact Tracy Friday at 817.546.8693.

Green Revolution - Positive Youth-Development Program

Green Revolution kicked off the year by inviting a premier group of its Agents to 77 Ranch for the 2nd Annual Pre-Alumni Council (PAC) Leadership Academy. The Academy is a platform for leadership development for those nominated to the program's executive decision-making board (PAC).

"Opportunity is always around the corner." These were the opening words admonished to the Agents upon their arrival to 77 Ranch by its owners Gary and Sue Price. The Agents embraced new opportunities for personal development and learning on the land. During their time on the ranch, the PAC successfully completed their annual service-learning project. They were tasked with enhancing sustainable cattle rotation operations by removing fence-line posts abandoned during the Great Depression. The PAC approached the task as an opportunity for teamwork. One PAC member reflected on the opportunity stating that "the task seemed too hard at first, but working as a team made the job easier." The PAC concluded the Leadership Academy with a hiking with Gary Price through a crown jewel of North Central Texas, a remnant portion of the Blackland Prairie located on his 2,500-acre ranch. Hiking through this pristine habitat served as the backdrop for discussions on the importance of reading the land to properly manage its resources. Plants tell an important story of a landscape's past, present, and future regarding nutrient, energy, and water balances on the land.

After this invaluable opportunity for service and experiential learning, Agents left 77 ranch motivated to find opportunities for GROWTH and learning in their landscapes with hopes of leaving their environment and community a better place. Want to get involved? Send inquiries to Reggie Robinson at 817.332.4441, ext. 262.

Research, Collections, & Publications

New Species Described

Peter Fritsch has described a new species in the sweetleaf genus *Symplocos* from the Western Ghats in southern India. Peter conducts research on this genus to better understand plant responses to climate change across geological time. *Symplocos* is an excellent group for this purpose because fossil fruits of the genus are abundant in ancient coal seams up to ca. 50 million years old. The species from India are particularly notable because, although we know that *Symplocos* generally migrated from north to south into the montane tropics as climates cooled from the Miocene onward, we do not yet know whether the Indian

species did so as well from Asia, or instead "rafted" with the subcontinent from the south as it collided with Asia. DNA sequencing can provide a definitive answer to this question but the Indian species have not yet been sampled and are still poorly documented. Peter worked with a young Indian botanist who discovered the new species (*S. parvibracteata*) in the mountains of Kerala state but lacked the expertise to confirm it as new. These types of international collaborations are critical for documenting global biodiversity and for mentoring early-career plant biologists from the developing countries like India that harbor most of the world's species diversity. You can find the article describing this new species in the Nordic Journal of Botany.

Inquiries, please contact Peter Fritsch at 817.332.4441, ext. 234.

Students and teachers of the course at the Itatiaia National Park. Alejandra is in a blue shirt the second from the left.

The fern *Jamesonia sp.* Growing on the rocks at the Itatiaia National Park.

BRIT in Brazil: Focus on Ferns in Rio de Janiero

Dr. Alejandra Vasco traveled to Rio de Janeiro, Brazil between August 21 and September 3. Her first stop was at the 68th Brazilian Botanical Conference, where she was invited to participate in a symposium on fern evolution and conservation. The symposium consisted of four talks. Alejandra, the only international researcher invited, give a talk on how studies in leaf evolution and development can help us to better understand the evolution of diversity in land plants. After the conference, Alejandra, along with two other Brazilian colleagues, Dr. Claudine Mynssen the curator of ferns of the biggest herbarium in Brazil the Rio de Janeiro Botanical Garden herbarium (RB), and Dr. Lana Sylvestre professor of the Federal University of Rio de Janeiro, co-taught a one-week course on modern and traditional tools to study ferns. The course had 15 Brazilian graduate students from all over the country and included lectures, computer exercises, and herbarium work, as well as a two-day fieldtrip to the oldest National Park in Brazil: Itatiaia National Park. Although the first image that comes to mind when one thinks about Rio de Janeiro are beautiful beaches, Rio de Janeiro State houses some of the most amazing mountains in Brazil, where a lot of plants are endemic (meaning they only grow there and nowhere else in the world). During the field trip, students were able to see and learn many different ferns growing in their environment. One of the greatest finds was a *Jamesonia*, a fern whose closest relatives grow in the Andean mountains hundreds of kilometers away.

Want to know more about research on ferns happening at BRIT? Contact Alejandra Vasco at 817.332.4441, ext. 262.

Cataloging Biodiversity in Missouri

Taylor Quedensley, one of our new research botanists, traveled to Missouri September 15–30 to conduct research on two projects. In Northwestern Missouri, he collected bryophytes and lichen-forming fungi at Crowder, Lewis & Clark, Van Meter, and Weston Bend State Parks. The flora of Northwestern Missouri is poorly known, especially when considering bryophytes and lichens, Taylor is making the most of critical funding received to complete biodiversity inventories at eight State Parks. Much of the land area in this part of Missouri has been converted to agricultural use and it is imperative that we increase our knowledge about the species that still exist in the few intact habitats. This work is funded by the Missouri Department of Natural Resources through June 2018, and to date over 1000 specimens have been collected for this project.

Taylor will also be traveling to the Missouri Ozarks where he and collaborators Mark Mills and Julie Jedlicka from Missouri Western State University are monitoring biodiversity using vascular plants, amphibians, and reptiles, including birds, to assess the effects on ecosystem management in threatened glade ecosystems. Fire suppression, invasive species, and other disturbances have led to these ecosystems being severely threatened and warranting conservation efforts. This project is funded by the Missouri Department of Conservation through June 2020. Specimens from both of Taylor's projects will be deposited at the BRIT Herbarium and duplicate specimens will be sent to other herbaria in in the U.S.

Inquiries contact Taylor Quedensley at 817.332.4441, ext. 221.

Next-generation DNA Sequencing Resolves Wintergreen Species Relationships

Peter Fritsch published a paper in the scientific journal *Molecular Phylogenetics and Evolution* entitled "Plastid phylogenomics and adaptive evolution of Gaultheria series *Trichophyllae* (Ericaceae), a clade from sky islands of the Himalaya-Hengduan Mountains." This paper is one product of Peter's visiting scholarship in China conducted in November and December of 2016—expect other publications from this partnership to emerge in the coming months. This paper documents the phylogenetic history of a group of small mat-forming alpine Himalayan plants in the wintergreen group, which has held Peter's interest for some time now for its species diversity and ecological adaptations. The plants are an original source of oil of wintergreen, commonly used as a pain reliever and flavoring agent (pictured is a fruiting plant of *G.*

hypochlora from Yunnan, China). One significant aspect of the study is that it employed next-generation DNA sequencing methods to generate massive amounts of DNA sequence data. Such "genomic" methods are effective in resolving many questions in plant biology whose answers were heretofore ambiguous with the older "Sanger" sequencing methods. In this case, many unresolved parts of the phylogenetic tree of this group are now robustly resolved, and the data supports the group's origin in the eastern extension of the Himalaya range in China. The knowledge from phylogenetic studies like this one can be used in many applications such as crop improvement. You can read more about this study online here. Need to know more, please contact Peter Fritsch at 817.332.4441, ext. 234.

Miscellaneous

Have You Volunteered This Year?

If the answer is no, you aren't alone, but we can change that. According to the New York Times, volunteering has been increasing during the 2017 year and 10% of those who don't volunteer say it is because no one has asked them. So, we are asking; would you please volunteer? As you volunteer at BRIT, what will you discover? Will you be the volunteer who locates the oldest specimen during the herbarium inventory? Could you possibly discover you have a real gift engaging young visitors in the Treehouse during Bella's story time? While helping maintain the GSA plots you might discover the love of a plant you weren't familiar with. With many different exciting programs located on our campus the possibilities of what you could discover about yourself or our plant world are endless. Our next volunteer orientation is October 16 at 5 p.m., would you like to attend? To RSVP or for more information. please contact Julie Donovan, Director of Volunteers and Public Engagement Julie Donovan or call 817.546.1846.

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