December GROWing Together™ Newsletter

The holiday season is upon us! If you're looking for a unique present for a special person on your list, consider giving the gift of membership. Visit FWGrow.org or contact the membership office at membership@FWGrow.org for more information. It's a wonderful way to share the beauty of the Garden with those you love – and avoid a trip to the mall!

Table of Contents

News
Have a Holly, Jolly Holiday Season with the Fort Worth Botanic Garden and BRIT
Vine to Table Just Around the Corner
Buy Tickets Now for “Butterflies in the Garden: Celebrate the Change” this Spring at the Botanic Garden
Experience the Gardens of Montreal and Québec City with BRIT
Pat Harrison Recognized by the Fort Worth Business Press with the Great Women of Texas Dedicated Service Award

In the News

Fort Worth Botanic Garden
Time for Tulips

Art and Education
GROW Brings Cutting-Edge Technology to Area Schools
GROW Adult Education Classes

Research
BRIT Researcher and Undergraduate Student Intern Discover a New Species of Slime Mold
New Fern Species Named to Honor BRIT's Research Botanist Dr. Alejandra Vasco
BRIT Researcher Receives Grant to Fund Expedition to Madagascar
BRIT Press Releases New Issue of the Journal of the Botanical Research Institute of Texas

Calendar of Events
Have a Holly, Jolly Holiday Season with the Fort Worth Botanic Garden and BRIT

You're invited to Holiday in the Garden, a day of shopping, dining, music and fun in the Fort Worth Botanic Garden. Make your calendars for Dec. 14 and bring your holiday cheer!

Events include:

- **2019 Holiday Sip and Shop**: Browse a local artisan market featuring handmade goods including ceramics, jewelry, artwork, home décor, bath and body products, sweets and treats and much more! Shop to the sound of a live band and snack on delicious treats from area food trucks. 11 a.m. to 5 p.m. at BRIT and the Botanic Garden.

- **Santa in the Garden**: Bring your kids to meet the big guy in red and enjoy family crafts and games. 11 a.m. to 2 p.m. Event is free; photos with Santa are $10.

- **Holiday Tea**: Enjoy a holiday afternoon tea in the Botanic Garden’s Oak Hall Ballroom. Enjoy a selection of teas and treats in a festive atmosphere. 1 p.m. to 3 p.m. Reservations are required; call 817-392-5517. Adults $45; children $35.

- **Afternoon in the Garden and Holiday Movie Free Showing**: Spend the afternoon exploring the Fort Worth Botanic Garden, then snuggle down for fun holiday movie. Check the event page for details on which movie we’re showing! Both events are free; space for the movie is limited to the first 200 guests.

**EXCLUSIVE**: GROW Members will have an opportunity to attend a Sip and Shop preview, offering wine and appetizers, plus a 10% discount on gift shop items Dec. 12 between 5 p.m. and 7 p.m.
Join Honorary Hosts Dana and Dee Kelly at the new Dickies Arena Jan. 15 to celebrate the winners of the FWSSR/BRIT Texas Sustainable Winegrowing competition and the BRIT/FIVS International Sustainable Winegrowing competition. For sponsorships, tickets or more information visit the website or contact Sara Richardson at srichardson@brit.org or 817.332.2748.

Buy Tickets Now for Butterflies in the Garden 2020 to "Celebrate the Change" this Spring
“Celebrate the Change” in the Fort Worth Botanic Garden’s recently restored conservatory and marvel at a multitude of butterflies during “Butterflies in the Garden,” the largest exhibit of live, exotic butterflies in north central Texas, starting Feb. 29, 2020 and running through April 12, 2020. The six-week exhibit will be open daily, including Sundays, from 10 a.m. to 4 p.m.

“Beautiful, exotic butterflies of every hue and size will be flying in the conservatory,” said Gail Manning, Fort Worth Botanic Garden entomologist. “People will have a chance to walk among hundreds of fluttering butterflies from around the world, watch them land on tropical flowers and lush foliage — maybe even on their shoulders — and learn about the amazing life cycle of the butterfly.”

Co-hosted by the Fort Worth Botanic Garden and BRIT, Butterflies in the Garden will offer educational programs, exciting exhibits, gift shop items and more designed to enhance the visitor experience.

The exhibit will feature Central American butterflies such as the Starry Night Butterfly (Hamadryas laodamia), the Mosaic (Colobura dirce), the elegant Glass Wing (Greta oto), Small Postman (Heliconius erato), Pink-Spotted Cattleheart (Parides photinus), the green Malachite (Siproeta stelenes), Tiger Longwing (Heliconius hecale), and Blue Morpho (Morpho peleides). Of these, the Blue Morpho is the most striking and a perennial favorite among visitors. Also included in the exhibit will be butterflies from North and South America, Africa and Asia.

Tickets for timed entrance may be purchased online starting today. Admission is $12 for ages 16-64; $10 for seniors (65+); $8 for ages 6-15; and free for children under five. School groups of 20 or more may purchase tickets in advance for $8 per person. GROW members receive a discounted price of $10 for adults, $8 for seniors, and $6 for children. For those who want to visit both the Garden and the butterfly exhibit, the price is $18 for adults and seniors and $10 for children.

Members Travel Tour:
Experience the Gardens of Montreal and Québec City
The world is filled with beautiful spaces, and the Fort Worth Botanic Garden and BRIT want to help you discover them. Visit Montreal and Québec on the **First Members Travel Tour**, a program designed to share with you some of the world's most extraordinary gardens and landscapes.

Our first adventure will be a tour of the gardens of Québec and Montreal. GROW members will depart on June 19, 2020 and spend seven nights in Canada's remarkable old-world cities famed for their food, culture and exquisite gardens.

Guests will enjoy private tours of the Montreal Botanic Garden, the Domaine Joly-De Lotbiniere Garden, the Roger Van den Hende Botanical Garden and the Joan of Arc Garden. In addition, you'll experience fine meals, stay in two of Québec’s most famous—and luxurious—hotels and relax in the comfort of private motor coaches. During these custom tours, you'll have plenty of time to explore the unique culture of these French-speaking cities.

Another delightful benefit: You will be accompanied by former BRIT Senior Vice President for Education Pat Harrison, who will share her unique insight into the world of botanical gardens, plant collections, environmental education and more.

Because this tour offers limited availability, travelers must commit by **Monday, Dec. 16**, with payment taken at a later date—so act now. For more information, download the tour brochure [here](#), or contact GROW Membership Director Katherine Campbell for details and to reserve your spot today ([kcampbell@brit.org](mailto:kcampbell@brit.org)). Not yet a GROW member? Visit [www.FWGrow.org](http://www.FWGrow.org) to join today.

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**Time for Tulips**  
*Botanic Garden Staff Prepare this Winter for a Colorful Spring*

This spring, the Fort Worth Botanic will burst into bloom with a dazzling display of tulips. Staff and volunteers are in the process of planting a record 100,000 tulip bulbs around the Garden.

Some bulbs will be planted in existing beds throughout the Garden, but 80,000 flowers will appear in newly created beds along Rock Springs Road and across from the Rock Springs Café. Staff and volunteers will plant 80,000 tulip bulbs during the first two weeks of December. Ideally, soil temperature should be 55° F for planting tulip bulbs. After the bulbs have been planted, 45,594 pansies will be planted over the tulip bulbs for a spectacular layered effect in the spring: tulips coming up through the pansies. The tulips should start blooming in mid- to late March and persist through early April. Make plans now to come and see this horticultural spectacle.
Pat Harrison Recognized among Great Women of Texas

BRIT's Former Sr. Vice President for Education Pat Harrison was honored with the Texas Dedicated Service Award by the Fort Worth Business Press on a night that shined a spotlight on women who devote their time and careers to service.

The award recognized Harrison’s focus on helping children unlock knowledge about the natural world. Previously named a Great Woman of Texas in 2003, the Business Press created a special category given her decades of outstanding service to the community. Harrison recently retired as BRIT's senior vice president and director of education.

At the event Great Women of Texas event, Harrison discussed one of her favorite quotes, by author Nelson Henderson, "The true meaning of life is to plant trees, under whose shade you do not expect to sit." Harrison said the quote reminds her of, “The value of investing our time and energy into something greater than ourselves.” Pictured above from left, Connie Johnson, Cheryl Potemkin, Pat Harrison, Debbie Morrison.

GROW Brings Cutting-Edge Technology to Area Schools

With the goal of preparing the future workforce in E-STEM careers, the GROW education team partnered with Hitachi to bring its portable scanning electron microscope (SEM) to area schools. The microscope allows images to be magnified up to an astounding 100,000 times.

The education team hosted a training session over the summer instructing local teachers on how to operate the SEM and integrate it into their STEM courses. So far this school year, more than 1,000 students from area high schools have enjoyed looking at specimens far beyond the capability of the human eye. Students investigate samples collected from around their classroom and even their backyards.
Through this partnership with Hitachi, curiosity grows in students as they make career connections and experience technology they have never seen before. “My students and myself-included were in total amazement!” said one teacher participant.

Research Updates

BRIT Researcher and Undergraduate Student Intern Discover New Species
BRIT Resident Research Associate Dr. Harold Keller and undergraduate student intern Vanessa Marshall recently discovered a corticolous myxomycete new to science, *Licea iridescens*, on bark from a living American elm tree. Unique crystals of unknown origin and chemical composition were also present on tree trunk bark observed for the first time. These discoveries were published recently in the *Journal of the Botanical Research Institute of Texas*. The name *iridescens* refers to the iridescent bluish and reddish sparkles from the sides of the sporangia when viewed with directed light using a microscope. The scanning electron microscope (SEM) images were the first images published using the new SEM instrument from the George C. and Sue W. Sumner Molecular and Structural Laboratory at BRIT. Volunteers Edward Forrester and Billy Stone made the photographic images. Read the article [here](#). Pictured above left: Magnified image showing *Licea iridescens* sporangium. Above right: Scanning electron micrograph of broken top half of sporangium observed at 800x.

New Fern Species Named to Honor BRIT’s Research Botanist Dr. Alejandra Vasco
BRIT fern expert Dr. Alejandra Vasco now has a new species named after her. The species *Elaphoglossum vascoae* was published in the scientific journal *Annals of the Missouri Botanical Garden*. The new species belongs to the deer tongue genus *Elaphoglossum* (from the Greek *elapho* = Deer; *glossum* = tongue), a group Dr. Vasco has been working with since her PhD. The new species is a beautiful fern with shiny, wavy and long simple leaves that grows as an epiphyte in the Andes of Colombia, Ecuador, and Peru. Pictured at right: Dr. Robbin C. Moran, one of the authors, holding a specimen of *Elaphoglossum vascoae*, collected by Drs. Vasco and Moran in Pichincha, Ecuador, in 2011.
BRIT Researcher Receives Grant to Fund Madagascar Expedition
This month the Global Genome Initiative awarded BRIT Researcher Dr. Morgan Gostel a grant to support a field expedition to Madagascar. This grant will fund one month of fieldwork in northern Madagascar to collect several families of flowering plants, including four of the most species-rich and highly endemic families known from the island. Dr. Gostel is especially targeting collection of species in the sunflower family, Asteraceae. There are more than 600 species of Asteraceae in Madagascar alone, and more than 450 of these species are found nowhere else on Earth.

GROW Adult Education Classes
The holidays call for floral creativity! Are you ready to try your hand at holiday floral design or forcing winter bulbs? Then join us for one of our December GROW adult education classes and be sure to visit our website for a sneak peek at early-2020 class offerings. We offer hands-on and lecture-based classes at both BRIT and the Fort Worth Botanic Garden, all taught by experts in their fields.

For more information please visit our webpage or contact Erin Starr White.
Upcoming classes include:
December 14  Fragrant Winter Blooms: Forcing Bulbs
December 14  Floral Design: Christmas

BRIT Press Releases New Issue of
the Journal of the Botanical Research
The BRIT Press published Volume 13, Number 2, of the *Journal of the Botanical Research Institute of Texas* (*JBRIT*) on 31 October 2019. The 239-page issue contains 13 scientific papers from national and international botanists describing new plant species, new fossil plant species, and new floristic discoveries from across the U.S.A. including Texas, the Caribbean and South America. This 13(2) issue is available in libraries around the world, through subscription, and online at [http://www.brit.org/brit-press/jbrit](http://www.brit.org/brit-press/jbrit).

In the News

- **The GreenSource DFW Podcast** released an episode about the new BRIT Seed Bank and how it will be used to protect plant species diversity. [Listen here.](http://www.brit.org/brit-press/jbrit)
- **Botanic Garden Senior Horticulturist Steve Huddleston** was featured in the November issue of *Texas Living* in an article about "living" Christmas trees—evergreen trees that can be used in Texas landscapes all year round. Check out the magazine [here.](http://www.brit.org/brit-press/jbrit)
- **Huddleston** also contributes to Neil Sperry's Texas Gardening on WBAP every Sunday morning at 8 a.m. Listen at 820 AM or 99.5 FM-HD2, or stream the program through [www.wbap.com](http://www.wbap.com) or on many streaming radio services.

Calendar of Events

**December 2 through January 6**

- December 3: [Research Lecture Series: From Proteas to Welwitschia: Unique Plants of Namibia and the Cape of Good Hope](http://www.brit.org/brit-press/jbrit)
- December 5-17: [Young Artists: All Saints' Episcopal School](http://www.brit.org/brit-press/jbrit)
- December 7: [Mindfulness Meditation](http://www.brit.org/brit-press/jbrit)
- December 12: [Holiday in the Garden Member Preview](http://www.brit.org/brit-press/jbrit)
- December 14: [Holiday in the Garden](http://www.brit.org/brit-press/jbrit)
- December 14: [Girl Scout Saturday](http://www.brit.org/brit-press/jbrit)
- December 14: [Fragrant Winter Blooms: Forcing Bulbs](http://www.brit.org/brit-press/jbrit)
- December 14: [Floral Design: Christmas](http://www.brit.org/brit-press/jbrit)
- January 4: [Raised Beds for Instant Gratification](http://www.brit.org/brit-press/jbrit)
- January 6: [Mindfulness Meditation](http://www.brit.org/brit-press/jbrit)