

Learning from Plants August 13-17, 2005 Austin, Texas

# Registration Booklet

Annual Meeting of Four Professional Societies:

- Botanical Society of America
- American Society of Plant Taxonomists
- American Bryological and Lichenological Society
- American Fern Society



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American Society of Plant Taxonomists (ASPT)

Elizabeth A. Kellogg, University of Missouri-St. Louis









American Bryological and Lichenological Society (ABLS)

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# Conference Overview

The annual Botany Conference brings together a broad spectrum of researchers, professors, educators, and motivated students, all focused on what's new and vibrant in the diverse field of plant biology. Botany 2005 promises to be one of the most successful in the series. This is the annual conference of four leading professional societies, the Botanical Society of America, the American Bryological and Lichenological Society, the American Society of Plant Taxonomists, and the American Fern Society.

An anticipated 700 participants will present approximately 500 scientific contributions, including 7 symposia, papers, posters, and special lectures. A full slate of field trips and scientific workshops and social events will round out the program.

Botany 2005 will be held at the Austin Hilton, a new hotel that has a enough meeting space for the entire program. An Exhibit Hall will be located in a plush ballroom, and will be the center of social activities including conference-wide breaks and poster session for the meeting.

Saturday, August 13, will feature the 4th Educational and Outreach Forum. This successful component of the Botany conference is designed to draw an audience of educators and researchers involved in the teaching of biology and plant science on many levels, from kindergarten through college. The day will include a range of interesting discussion sessions, a keynote lecture by Barbara Schulz, Teacher Leader for the National Academy of Science, Center for Education, and will conclude with a reception, which will give attendees the opportunity to discuss and network in a social setting. For the first time, participating teachers will be able to apply for Texas Continuing Professional Education Credits for attending Forum sessions and activities.

Sunday, August 14, will be an active day of FREE workshops and fieldtrips. Sunday evening will open the scientific meeting with the conference-wide Plenary Lecture by Dr. José Sarukhán, a past president of the Mexican Botanical Society and a foreign member of the U.S. National Academy of Sciences and the Royal Society of London. His lecture will be followed by an All-Society Mixer.

Monday morning, August 15, kicks off the scientific sessions and symposia. Tuesday afternoon, August 16, will feature a conference-wide Poster Session, with an expected 200 posters featuring current research and recent topics. Scientific Sessions will conclude on Wednesday August 17. Participating Societies will also hold social events and meetings through out the week.

Please visit the conference website for complete meeting information and full details about the scientific and educational programs (www.botanyconference.org), as well as the inside the back cover of this booklet for a conference overview.



# Austin, Texas

Known for its casual and playful nature, Austin is the playground of Texas. Situated at the center of the Lone Star State, it stands as the gateway to the Texas Hill Country and the Highland Lakes. As the state capital and home to the University of Texas, the city supports a politically charged and culturally rich environment. It's hip, trendy, and high-tech. A large creative population—primarily musicians and artists—enhance its eclectic nature.

With a temperate year-round climate and 300 days of sunshine a year, Austin lives for the outdoors. Nature trails, parks, and wilderness preserves create an oasis in the heart of the city. Town Lake bisects the center of downtown and is bordered by 10 miles of hike-and-bike trails where devoted joggers, walkers, and cyclists flock every hour of the day.

Outdoor enthusiasts will find Austin blessed with parks and nature preserves aplenty. Best known is Zilker Park in the center of the city. In addition to Barton Springs and various trails, the 400-acre lakeside refuge boasts soccer fields, a children's playground, Zilker Botanical Gardens, The Austin Nature & Science Center, and a miniature train popular with the kids. Throughout the city and surrounding hills, dozens of lakeside and creekside parks appeal to diverse tastes.



State Capital



Texas State History Museum

Ecologically minded Austinites are understandably proud of such Hill Country jewels as Wild Basin Wilderness Preserve and Mayfield Park & Preserve.

Originally a buffalo hunting ground favored by Tonkawa Indians, Austin was permanently settled in 1838 as a trading post. Now, more than a million people live in the city named for Stephen F. Austin, who colonized Texas.

The Texas State Capitol, an imposing pink granite structure, commands a stately presence in downtown. Actually 14 feet taller than the nation's capitol, the Texas Statehouse is the largest domed statehouse in the country.

Texas' larger-than-life history comes together under one roof at the new Bob Bullock Texas State History Museum, which features intriguing artifacts, interactive exhibits, multi-media shows, and an IMAX Theatre.

Austin is one of only a few U.S. cities with professional ballet, symphony, opera, and theater companies. With 20 museums, dozens of galleries, and as many as 35 theater companies, the city is experiencing a cultural renaissance.

Many of the city's cultural resources are found on the campus of the University of Texas, where the Blanton Museum of Art opens a new facility in 2005 and the Harry Ransom Center completed a renovation in early 2003.

The Lyndon B. Johnson Library and Museum, also located on campus, remains the most visited of the nation's presidential libraries. A scale replica of the Oval Office, artifacts from Air Force One, and volumes of official papers chronicle the rise of a young man from Central Texas who would be president.



Lyndon B. Johnson Library



From April through October, 1.5 million Mexican freetail bats live under the Congress Avenue Bridge that spans Town Lake. Onlookers flock to the shores nightly to watch the nocturnal creatures emerging from beneath the bridge.



# Austin's Music Scene

In the city where the music never stops, live music plays at more than 100 venues on any given evening. A little blues, a little country, the beat of rock and roll, and even a few jazz licks puts Austin music into a distinctive music genre that's difficult to label. The largest concentration of music venues is found downtown in the Warehouse District and along Sixth Street, a six-block stretch of bars and restaurants, within walking distance of the Austin Hilton.

Once known mostly for its country and blues music, today Austin's music scene is as diverse as its ever-growing population. The state's capital is a cradle of musical talent for those like Stevie Ray Vaughan and the late Janis Joplin, as well as that of living legends and Austin residents Willie Nelson, The Dixie Chicks, and Asleep at the Wheel's Ray Benson.



# GETTING TO AUSTIN

#### **Airlines**

Austin is served by the Austin-Bergstrom International Airport located at 3600 Presidential Blvd.; Austin, Texas 78719 Airport code is AUS, and is about 7 miles from the Austin Hilton.

#### Passenger Airlines and Cities Served

- America West, Reservations and Tickets: 1-800-235-9292
- American Airlines, Reservations and Tickets: 1-800-433-7300
- American Airlines, Austin Business Office: 512-530-6100
- Continental Airlines, Reservations and Tickets: 1-800-525-0280
- Delta, Reservations and Tickets: 1-800-221-1212
- Frontier Airlines, Reservations and Tickets: 1-800-432-1359
- Northwest, Reservations and Tickets: 1-800-225-2525
- Southwest, Reservations and Tickets: 1-800-435-9792
- United, Reservations and Tickets: 1-800-241-6522



Transportation Systems

### **Airport Shuttles**

A shuttle system is available from the airport to the Austin Hilton via Super Shuttle.

Approximate cost is \$11.00 per person for a one-way trip. Call for reservations at: 1-800-258-3826 or online at www.supershuttle.com

### By Car



Botany 2005 has arranged with Avis Rent A Car for discounted car rental for conference attendees. Make arrangements by calling 1-800-331-1600 and using our Avis Worldwide Discount number: J955218.

### By Bus

Check economical travel by bus to Austin by calling (512) 458-4463, or online at www.greyhound.com

The station is located at:

916 E Koenig Lane Austin, TX 78751

### **By Train**

Check www.amtrak.com for fares and schedules to get to Austin. The station is located at:

250 North Lamar Blvd. Austin, TX 78703





# GENERAL MEETING INFORMATION

Registration

Full instructions on how to register by mail, fax, or on-line are provided:

- 1) in this brochure,
- 2) as a form available for downloading at the Botany 2005 website (www.2005.botanyconference.org)
- 3) on-line registration site, also accessible from the BOTANY 2005 website.

A confirmation of your registration will be e-mailed to you within 7 business days of receipt. Tickets for events, a copy of the Final Program, book of Abstracts, and an official name badge will be included in your packet of registration materials available at the Registration Area at the conference.

#### PLEASE BRING THE REGISTRATION CONFIRMATION NOTICE WITH YOU TO THE CONFERENCE

This year's annual meeting will once again include a special Forum to be held in conjunction with the scientific meeting. The Forum will begin on Friday evening with early registration and a light reception, then continue on Saturday with a Keynote lecture and a series of concurrent sessions. Saturday evening will conclude with a reception. Sunday continues with hands-on workshops The Federal Tax ID number for the Botanical Society of America presented as two-hour, half-day or full-day events. Please see the is: 62-0671591. Workshop section of this brochure for a full discussion of topics, leaders, logistics, special notes. All Workshops are FREE!

Registration options are available for those who wish to attend the Forum only, the Scientific Meeting only, or the Full Conference.

Scientific meeting registration fees cover four days of the meeting, including Workshops, the Plenary Lecture, the All-Society Mixer, all Scientific Sessions, Poster Displays, and the Exhibition Hall. An official name badge will be required for admission to all Scientific Sessions and the Exhibition Hall.

Registration fees must be paid to obtain the official name badge.

On-site registration, pickup of registration packets for those who have pre-registered, and late purchase of social event tickets can be done at the Registration Area, if still available.

### Registration Payment

Checks and credit cards are the only acceptable forms of payment for registration. Wire transfers and purchase orders are not accepted.

# **Registration Area** Times of Operation

Friday	August 12	6:00 pm to 9:00 pm
Saturday	August 13	8:00 am to 6:00 pm
Sunday	August 14	8:00 am to 6:00 pm
Monday	August 15	7:30 am to 5:00 pm
Tuesday	August 16	7:30 am to 5:00 pm
Wednesday.	August 17	7:30 am to 12:00 pm

# **Special Services**

If you require special accommodations, assistance, or services during Botany 2005, please check the box provided on the registration form and a Botany 2005 representative will contact you.

#### Child Care

Child care can be arranged by directly calling the Austin Hilton. Attendees are completely responsible for making their own arrangements with the provider. Botany 2005 assumes no responsibility for any difficulties or consequences arising from the use of a child care provider and recommends that the provider be screened carefully.

#### Coffee Breaks

Complimentary coffee breaks will be held in the Exhibit Hall at specific times each day. Check the Final Program for times.

#### Federal Tax ID Number

### Refund and Cancellation Policy

Requests for registration fee refunds will be honored if received in writing before July 9, 2005.

> Botany 2005 Registration 2813 Blossom Ave Columbus, OH 43231

Registration fee refunds will be subject to a \$50 processing fee. Fieldtrips and Local Tour, Social Event, and Workshop fees are non-refundable if cancelled after July 9th.

Full fee refunds will be granted for Social Events, Scientific Field Trips, Local Tours, and Workshops if they exceed maximum enrollment, do not meet minimum enrollment, or if cancelled for any reason.

ALL refunds will be issued **AFTER** the conference.

# All-Society Mixer

All registrants are invited to a welcoming mixer on Sunday, August 14th from 8:30 pm to 10:00 pm following the Plenary Lecture. A cash bar and complimentary soft drinks and snacks will be available.

# Final Program and Abstracts

The final Program and book of Abstracts will be distributed along with registration materials on-site at the registration desk. The Program and Abstracts will be searchable on the Botany 2005 website (www.botanyconference.org) prior to the confer-

# GENERAL MEETING INFORMATION

# Society & Association Ticketed Events

A listing of society and group events requiring tickets are printed in this brochure. To purchase tickets for those requiring paid admission, please check the appropriate box on the registration form and add the cost to your other fees. For those who pre-register, event tickets will be included in your registration packet, which will be distributed on-site at the Registration Desk. A limited number of tickets may be available for purchase at the Registration Desk onsite at the meeting, but availability is not guaranteed.

#### Internet Café

Internet accessibility will be available in the Internet Cafe, which will be in the Hilton, at a location to be announced. The Internet Cafe will be in operation from 8:00 am to 5:00 pm on Monday through Wednesday, August 15-17.

Workshops

A series of FREE workshops are scheduled for Sunday, August 14<sup>th</sup>. Please bring your "registration confirmation notice" so that you have a record of your ticket. Please refer to the workshop descriptions in this brochure for full discussion of workshop topics, leaders, logistics, and special notes,

Field Trips

A series of Scientific Fieldtrips are scheduled before, during, and after the scientific program from Saturday, August 13, to Thursday, August 18<sup>th</sup>. Fieldtrips are ticketed events; tickets may be purchased during registration. If you participate in a field trip before you pick up your registration packet, please bring your "registration confirmation notice" so that you have a record of your purchased ticket. Please refer to the Scientific Field Trip descriptions in this brochure for full discussion of trip destinations, trip leaders, logistics, special notes, and expected expenses. A limited number of tickets may be available for purchase at the Registration Desk on-site at the meeting, but availability is not guaranteed.

# Companion/Local Tours

Companion/Local Tours have been arranged to take place during the meeting. Local tours are ticketed events; tickets may be purchased during registration. For those who pre-register, tickets will be included in the registration packet, which will be distributed on-site at the Registration Area. Please refer to the Local Tour descriptions in this brochure for a full discussion of destinations and activities. A limited number of tickets may be available for purchase at the Registration Desk on-site at the meeting, but availability is not guaranteed.

Transportation for all Field trips and Local Tours departs from and returns to the main Lobby of the Hilton.

### **Student Projectionists**

Students who work up to 10 hours (2-3 sessions) as a projectionist can have their early student registration fees refunded. Experience with 35mm slide, overhead, and LCD projectors is desirable, but not necessary. In return for successfully serving as a projectionist for all assigned sessions during the meeting, the early student registration fee equivalent will be refunded. Fee waivers are not granted. Student projectionists must register for the meeting and pay the registration fees.

A mandatory training session will be held on Sunday, August 13th. Specific location to be announced.

If you are interested in serving as a student projectionist, please fill out the enclosed "Application to Serve as a Student Audio-Visual Projectionist". Please submit your application by July 15th, 2005.

#### **Exhibits**

Be sure to visit the outstanding array of commercial and scientific exhibits offered. The tentative schedule for the Exhibit Hall is:

Saturday	August 13	2:00 pm to 7:00 pm
Sunday	August 14	12:00 pm to 5:00 pm
Monday	August 15	9:00 am to 6:00 pm
•	_	9:00 am to 6:00 pm
Wednesday	August 17	9:00 am to 6:00 pm

#### Posters and Poster Session

Posters will be on display for the duration of the meeting in the Exhibit Hall from 9:00 am to 6:00 pm Monday through Wednesday. Regular submission posters will fit onto bulletin Boards that are 4' tall and 8' wide. Recent topics posters will fit onto bulletin boards that are 4' tall and 4' wide. Materials may be secured with push pins, which will be provided.

Poster set-up time is Sunday, August 14, from 12:00 pm to 5:00 pm. Poster take-down time is Wednesday, August 17, from 2:00 pm to 6:00 pm. Poster Session for all societies will occur at the same time on Tuesday, August 16<sup>th</sup> from 12:30 pm to 2:00 pm.

Neither the Hilton management, nor Botany 2005 management, are responsible for any poster materials remaining after 5:00 pm on Wednesday, August 17<sup>th</sup>.

# Contributed Papers and Symposium Sessions

All Contributed Paper and Symposium sessions will be held in Hilton meeting rooms, and audio amplification equipment will be provided in all rooms as needed. LCD projectors and computer stations will be available as standard presentation options. Computers will support Windows XP, Microsoft PowerPoint presentations. 35mm slide projectors and overhead projectors will NOT be standard, but will be available as needed.

# GENERAL MEETING INFORMATION

# Audio-Visual Information

Botany 2005 will provide the opportunity for presenters to deliver computer-based presentations as a standard presentation option.

The Pentium III computers that will be provided use Windows XP Pro and Office XP 2003 suite including PowerPoint. The PowerPoint application will handle older versions as well as Macintosh saved as a 2003 or earlier version file. Be sure and double check your presentation for accuracy as PowerPoint sometimes does not always cross over between Windows and Macintosh based computers.

For computer presentations, files should be saved on CD ROMs. A centralized network will also be available.

For specific technical questions regarding your presentation, please consult the Botany 2005 website, www.2005.botanyconference.org, for complete information.

# ROOMMATE MATCHING SERVICE

#### Need help finding someone to share expenses?

Botany 2005 will maintain a list of registrants who have submitted their names and indicated an interest in sharing a room during the conference. Botany 2005 is not responsible for assigning roommates.

Registrants are responsible for contacting individuals on a password-protected list and for making their own arrangements.

To be included on the list, please submit your name, e-mail address and pertinent information on the "Room Sharing Service" link on the conference website (www.2005.botanyconference.org).

Only one roommate should make the reservations, and it is recommended that you make your reservations early. Botany 2005 will assume NO responsibility for any difficulties arising from a shared room and recommends that all potential roommates be screened carefully.

# Especially for Teachers

#### The Botany 2005 Educational Forum, August 13 & 14 is the place to be!

Interested in new ways to teach science through the use of plants in the classroom? Would you like to earn 15 Continuing Professional Education credits while doing so? Join us, network and become involved with science at the National Level!

Informative Sessions and FREE hands-on workshops planned especially for your interest:

- outlining the BSA Sci-π project and how you can become involved in an online science mentoring program supporting "Scientific Inquiry through Plants"
- discussing innovative ideas for using plants modeled in the Boston School districts
- explaining how you can become involved in a Texas restoration project
- using the "Origin of Species" to teach evolution
- sharing experiences of working with K-12 School Districts to put plants in the science curriculum
- engaging in opportunites for Outdoor Teaching and Learning in Texas for the K-12 classroom
- developing School-University parterships
- · learning about Digital Imaging in the teaching laboratory

Complimentary Hands-On Workshops - skills you can adapt to your own Classroom

- Keep Your Biology Class Alive with Fast Plants
- Activities & Ambassadors: Using Living Collections to Teach Schoolchildren through Field Trips
- Teaching Through Inquiry
- Implementing a Cooperative Group Learning Environment in Hands-On Biology Labs for Non-majors: Lessons from the Trenches
- BSA Sci-π: Seeds of Change in the Classroom
- C-Ferns in the Classroom
- Building the Tree of Life Workshop attend for FREE\*



get their registation fee refunded.

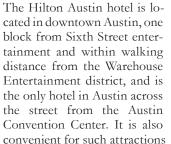


# Where to Stay at Botany 2005

Blocks of rooms have been reserved at the two hotels listed below, as well as in a private dormitory on the University of Texas Campus. Please plan to stay at the host hotel as this helps to keep the meeting costs down. You may make your own hotel reservations directly with the hotels using the information provided and be sure to mention Botany 2005 to get the conference rate. Make Dobie Center reservations through Botany 2005. Full payment for dorms stay is due with conference registration

#### **Austin Hilton**

500 East 4th Street Austin, Texas 78701 Phone: (512) 482-8000 www.hilton.com





as the Capitol Building, Bob Bullock Texas Historical Museum and the LBJ Presidential Library. Only seven miles or ten minutes from the Austin Bergstrom International Airport, the property features 800 rooms, each equipped with a spacious work desk with two phones (each with 2 lines), voicemail, and a data port offering Wireless High Speed Internet Service.

Rates: Single - \$112.00 Double - \$132.00 Triple/Quad - \$152.00

The Hilton is the host hotel for the meeting, all events, social and scientific. Please consider staying at the Hilton as our room block is very important in keeping the meeting as economical as possible.

### The Dobie Center Dorms

2021 Guadalupe Austin, Texas 78705 (512) 505-1000 www.dobiecenter.com



Botany 2005 has contracted with a private residence hall for primarily student housing at the conference. Dobie is located on the edge of the University of Texas - Austin campus and is about 2 miles away from the Hilton. Public transportation is available from the Hall to the Hilton. Check online at www.capmetro.org for the best route and times to fit your schedule.

Reservations can only be made through the Botany 2005 website. Linens are included as well as a breakfast buffet.

Rates: Single - \$45.00 per person Double - \$36.80 per person

### Hampton Inn and Suites

200 San Jacinto Austin, Texas 78701 Phone: (512) 472-1500 www.hamptoninn.com



Hampton Inn is the nation's leading chain of quality, value-priced hotels. Here you'll find clean, fresh, comfortable

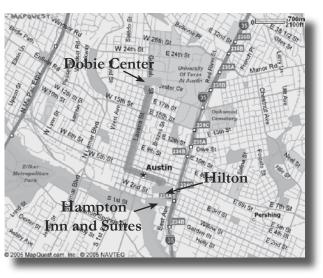
rooms standard with a coffee maker, iron and ironing board, data port, and free in-room movie channel. Enjoy free local calls and no surcharge for using a calling card, free breakfast bar, complimentary copies of USA Today Monday through Friday, free coffee and tea in the lobby 24 hours a day, and 24-hour front desk, message and fax service.

The Hampton Inn is within walking distance to the Hilton, about 4 blocks.

Rates: Single - \$105.00 Double - \$125.00 Triple/Quad - \$145.00







Map is approximate - please confirm your own directions

# THE FORUM - BOTANICAL EDUCATION AND OUTREACH

The Botany 2002 conference in Madison, Wisconsin included the inaugural education/outreach Forum. Approximately 1,000 plant biologists attended the overall conference, and 300 of these traveled to Madison early to attend the Forum. The Program Committee was delighted with the attendance and with the Forum program. Attendees completed evaluation forms of the Forum program, and they also found it to be very valuable and a refreshing addition to annual scientific meeting. Therefore, the Forum is now an annual event.

"...Teaching students about plant biology is as critical to the future of the field as is research and must take its proper place as an equally laudatory endeavor for botanists. Equally vital are activities that communicate the excitement of plant biology to students and teachers involved in K-12 education and to the general public..."

This passage from the *Botany for the Next Millennium* Report (BSA, 1995) emphasizes the important role of education and outreach, at all levels. However, there continues to be a reduction in the number of Botany courses taught at the undergraduate level and many Botany Departments and programs have been eliminated nationwide. Despite this, the global significance of plants continues to grow. It is therefore vital that botanists and their professional societies work to ensure that plants are represented in the undergraduate and graduate curriculum, as well as in science outreach initiatives.

The Forum will begin on Friday evening with early registration and an informal welcoming reception. The main sessions will occur on Saturday, August 13th. Although some informational sessions will be included, the program will primarily include interactive panel and roundtable discussions, as well as breakout groups focusing on a range of topics. Sunday's offerings will include a variety of complimentary hands-on workshops. Two-hour, half-day, and full-day workshops will be organized so that attendees can participate in more than one workshop, and/or participate in field trips, also planned for Sunday. Participating K-12 educators from Texas may earn up to 15 Continuing Professional Education credits for attending the Forum, workshops and field trips.

# Topical Themes of the Forum

- Emphasizing Botany across the Curriculum
- Designing Investigative Laboratories
- Engaging Undergraduates in Research
- Developing Effective Teaching and Mentoring Skills
- Supporting Effective Teaching and Learning
- Reaching Out beyond the Ivory Towers



#### Overview of Forum Schedule

Friday, August 12th ........... 6:00 pm - 9:00 pm ..... Registration and Informal Welcoming Reception

Saturday, August 13th ...... 8:00 am - 6:00 pm ..... Registration

8:00 am - 11:00 am .... Concurrent Sessions

11:00 am - 12:00 pm .. Keynote Address - Barbara Schulz

12:00 pm - 1:00 pm ... Lunch Break

1:00 pm - 5:00 pm ..... Concurrent Sessions

5:00 pm - 7:00 pm..... Reception

Sunday, August 14th ....... 8:00 am - 5:00 pm ..... Concurrent FREE Workshops and Field trips

(register for these separately)



Please visit the conference website for more details about the Forum, including a listing of presenters, session titles, abstract and even more.

www.2005.botanyconference.org

# THE FORUM - KEYNOTE ADDRESS



BARBARA SCHULZ
The National Academies
Teacher Advisory Council
Center for Education

Barbara brings a wealth of experience to her work with the Academies. With a Bachelors degree from the University of Illinois, and a Masters degree in Secondary Science Education from the University of Washington, Barbara has a long-standing love for teaching and working with young people. For 35 years, she taught Biology, Advanced Placement Biology, Environmental Science and many other classes to students in the 7th through 12th grades. Her experience spans public and private schools, middle and high schools and outreach programs in the Seattle area. She holds a K-12 lifelong teaching certificate and a Secondary Principal Certification in Washington State. She has served as High School Division Director for the National Science Teachers Association, President of Washington Science Teachers Association and President of the National Association of Biology Teachers.

Barbara has a record of leadership in education. As President of the National Association of Biology Teachers (NABT), she collaborated with Genentech, Inc. to support the professional development program and web site called Access Excellence (AE). As a strong advocate for educational outreach, Barbara networked with many scientific societies and was an invited presenter at many national meetings to talk about making connections between science teachers and scientists. By acknowledging cultural similarities and differences, she assisted others in making significant connections with educational professionals who work with K-12 students. In this capacity she was instrumental in establishing a schoolyard Long Term Ecological Research (LTER) collaboration with the nationally funded LTER program.

A firm believer in research experiences for her students, Barbara established a program called Shoreline Laboratory and Invention Convention where students from the entire school district could engage in science contests, present posters of their research and display inventions.

Not to be left out of the research experiences, Barbara is the recipient of several research fellowship awards and spent time at Fred Hutchinson Cancer Research Center, during several summers, studying lamp-brush chromosome structure in chickens. She then received a fellowship award to join a research team in the McMurdo Dry Valley Mountains of Antarctica to conduct environmental research projects in the most pristine environment on the planet. During this research and subsequent trips to Antarctica, she maintained journal entries and engaged students in research questions via the web.

As a result of her research fellowship awards, Barbara quickly recognized the value of connecting practicing teachers with the scientific research community. With her mentor scientist, Dr. Nancy Hutchison, she developed a professional development program for teachers at Fred Hutchinson Cancer Research Center (FHCRC) in Seattle called Science Education Partnership. This can be viewed on the web at the following site www.fhcrc.org/education This program has been operating for more than 10 years and is supported in part by Howard Hughes grants.

As more biology teachers in the Seattle area became connected to the scientific community, it became clear that there was a need for research experiences for young people. When given an opportunity, Barbara started a research lab for kids, BioLab, where young people with similar interest could come together, meet in research teams and conduct their own research projects. BioLab was housed at FHCRC, operated for two years and was temporarily closed due to the downturn in the economy.

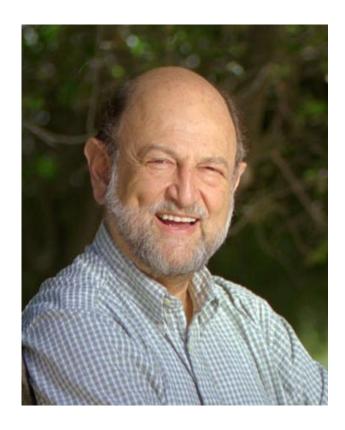
She was recently Acting Associate Director of HutchLab; an educational outreach program offered at FHCRC where high school aged young people can come together in the research lab and spend a week of intensive science investigation during the summers and where teachers can bring classes for a one-day workshop during the academic school year.

Barbara has been honored with several awards including the Presidential Award for Excellence in Teaching Science and Mathematics, The Outstanding Biology Teacher award and the Tandy Technology Scholar Award. She was recently a collaborating member of a scientific team researching ecological systems and doing the educational outreach for that team.

With a passion for teaching young people, working with teachers and for collaborating with the research community, Barbara brings an intense energy to establishing the Teacher Advisory Council in the Center for Education where she is currently employed.

# Complete Keynote address information at www.2005.botanyconference.org

# Scientific Meeting - Plenary Address



Dr. José Sarukhán

Professor Instituto de Ecología National Autonomous University of Mexico

> "Mexican biodiversity: returning knowledge and information to society"

Plenary Address
Sunday, August 14th - 7:30 pm

José Sarukhán has an undergraduate degree in Biology at the National Autonomous University of Mexico (UNAM), a Master's degree in Agricultural Botany from the Agricultural Graduate College in Mexico, and a Ph.D. in Ecology from the University of Wales, United Kingdom.

He was elected as Director at the Insitituto de Biologia (UNAM), where he served from 1979 to 1987. In February 1987, he was appointed Vice Chancellor for Science at UNAM, and in December 1988, was elected by the Board of Governors as Rector (President) of this university for the period 1989-1993 and reappointed for the same post for the period 1993-1997. UNAM is higher education institutional complex that produces more than 50% of the research in the country, with 22 teaching campuses and an equal number of research campuses, distributed all over Mexico. It has an undergraduate and graduate enrollment of 167,000 students and 28,000 faculty members. In 1988, at the end of its term as Rector, Sarukhán returned to his post as full-Professor in the Institute of Ecology. He was invited in 2000 by President Fox of Mexico, as Commissioner for Human and Social Development at the Executive Office of the President, a post that he resigned in March 2002.

José Sarukhán was president of the Botanical Society of Mexico (1972-1975), of the Mexican Academy of Sciences (1984-85), and of the Association for Tropical Biology (1986-1987). He has been Coordinator of the Mexican National Committee on the Study and Conservation of Biodiversity (CONABIO) since 1992. CONABIO has assembled the most complete database on the Biodiversity of Mexico established a World Biodiversity Information Network with both Mexican and Foreign nodal institutions, and has provided basic information to implement Biodiversity conservation and management policies in Mexico.

He was President of the Latin American Union of Universities (UDUAL). He was Coordinator of the Red Latino Americana de Botánica, the main South-South scientific cooperation and training organization in America which he helped found in 1987. He has published more than 125 papers and 6 books.

His main areas of interest have been Plant Population Ecology, Systems Ecology, and Biodiversity science, focused specially in Mexico, as well as the role of training and education in Science in general and in Ecology in particular in the development of Third World countries. Currently, he is involved in studying the roles of science in attaining sustainable development at the global and Mexican scales.

He was Chairman of DIVERSITAS (ICSU/UNESCO) an International Program on Biodiversity Science, and a Member of the World Commission on the Ethics of Scientific Knowledge and Technology (COMEST/UNESCO). He chaired the trinational committee on the effects of transgenic maize in Mexican maize land races, a study established by the CEC of NAFTA. He is a foreign member of the U.S. National Academy of Sciences and the Royal Society of London.

# Symposia, Colloquia and Special Addresses

#### PLENARY SYMPOSIUM

#### Botany in the World's Service

Organizer: Linda Graham, University of Wisconsin, Madison

#### SOCIETAL AND SECTIONAL SYMPOSIA

#### Biology of Dryland Plants

Organizers: Frank W. Ewers, Michigan State University

Jorge Lopez-Portillo, Instituto de Ecologia, Veracruz, Mexico

Sponsors: BSA Physiological, Ecological, Developmental & Structural, and Economic Botany Sections

#### **Comparative Chloroplast Genomics**

Organizers: Robert K. Jansen, University of Texas, Austin

Linda A. Raubeson, Central Washington University, Ellensburg

Sponsors: ASPT and BSA Genetics and Systematics Sections

#### Patterns and Mechanisms of Evolution of Island Plants

Organizer: *Kaius Helenurm*, University of South Dakota, Vermillion Sponsors: BSA Genetics and Systematics Sections, and ASPT

#### Dessication Tolerance in Brophytes and Lichens

Organizer: Brent Mishler, University of California, Berkeley

Sponsors: ABLS and BSA Bryological and Lichenological Section



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#### Connecting People to Plants-Botanical Messages that Make a Difference

Organizers: Suzanne Koptur, Florida International University

Lisa K. Wagner, South Carolina Botanical Garden, Clemson University, Clemson

Sponsors: BSA Ecological and Teaching Sections

#### The Cross Timbers: Botany, History, and Current Issues

Organizer: Stanley Rice, Southeastern Oklahoma State University, Durant

Sponsors: BSA Ecological and Teaching Sections

# BOTANY

#### SPECIAL LECTURES

#### Annals of Botany Special Lecture

"Signals that Regulate Germination and Polarized Growth in Pollen and Fern Spores"

Dr. Stanley Roux, The University of Texas at Austin

Sponsor: The Annals of Botany

#### Address of the BSA President-Elect

"The Power of Plants: Building Collaborations among Educational Institutions, Botanical Gardens, and Communities"

Dr. Edward Schneider, Santa Barbara Botanic Garden, Santa Barbara, California

#### **Pelton Award Lecture**

"A generation forgotten and Goethe remembered: Modularity and the evolution of flowering plants" Dr. William E. Friedman, University of Colorado, Boulder

# Annals of Botany - Special Lecture



Dr. STANLEY ROUX
Professor
The University of Texas
at Austin

"Signals that Regulate Germination and Polarized Growth in Pollen and Fern Spores" Dr. Stan Roux received his Bachelor of Science degree summa cum laude from Spring Hill College in Mobile, AL in 1966, his M.S. in Biology from Loyola University, New Orleans in 1968, and his Ph. D. in Biology from Yale University in 1971. After two years as a postdoctoral researcher in the Department of Biophysics and Biochemistry at Yale, he spent 5 years as an Assistant Professor at the University of Pittsburgh. In 1978 he moved to his current academic home at The University of Texas at Austin, where he was Chair of the Department of Botany (1986-90) and of the Division of Biological Sciences (1997-99), and where he is currently Professor in the School of Biological Sciences, Section of Molecular Cell & Developmental Biology, and faculty Ombudsperson for the University.

He has published over 100 primary research articles and scholarly reviews on the topic of the molecular mechanisms by which plants convert light and gravity signals into changes in growth and development. After winning Departmental, College, and University teaching awards, he was selected in 2000 as a member of the Academy of Distinguished Teachers at the University of Texas. In 2002 he received the Piper Professor Award from the Minnie Stevens Piper Foundation, a state-wide award given for excellence in College and University teaching.

Besides his research and significant involvement in teaching, he has served on the editorial board of Plant Physiology (1985-92), on the Executive Committee of the American Society of Plant Physiologists (1992-97), and as president of the American Society for Gravitational and Space Biology (1995). He is currently Editor-in-Chief of the Newsletter of the American Society for Gravitational and Space Biology and of the new journal *Gravitational and Space Biology*.

Special Lecture Sponsored by:



All field trips depart from and return to the Hilton. Participants should gather in the lobby. In all cases, dress should be suitable for outdoor activities and short hikes in weather that will be hot or rainy or both. Bring any personal gear you might require to enjoy the trip. Many of the sites described are designated natural areas or are proposed as such. Collecting plants in these areas is prohibited or severely restricted. It is best to leave the plants where you find them, taking away only notes, pictures, and memories.

Fifteen field trips are scheduled before, during, and after the scientific program. Field trip fees include transportation as well as admissions, guides, lunches, and beverages where indicated.

Please read the Refund and Cancellation Policy. Scientific field trips are ticketed events; tickets will be included in the registration packet. If you participate in a field trip before acquiring your registration packet, bring your registration confirmation notice so that you have a record of your purchased ticket. A limited number of tickets may be available for purchase at the Registration Desk on-site at the meeting, but availability is not guaranteed.



Leaving for field trips - Botany 2004

Pre-Confe	erence	<b>Trips</b>
Saturday,	Augus	t 13

FT-1	8:00 am – 4:00 pm	B&B - Botany and Barbeque - Palmetto State Park\$40.00	
Sunday	y, August 14		
FT-2	8:00 am – 12:00 pm	Useful Wild Plants of McKinney Falls State Park \$40.00	
FT-3	8:00 am – 4:00 pm	B & V - Botany and Vino - Pedernales Falls State Park	
		and Becker Vineyards\$64.00	
FT-4	9:00 am – 4:00 pm	Central Texas Spring-Fed Rivers: From Lindheimer's	
		Paradise to Endangered Species\$75.00	
FT-5	8:00 am – 4:00 pm	Blanco River Botany - Central Texas limestone endemics	
FT-6	8:00 am – 4:00 pm	Balcones Canyonlands Limestone Grotto and Canyon Flora:	
		Hamilton Pool and West Cave\$72.00	
FT-7	8:00 am – 5:00 pm	Early Tertiary Floras of Central Texas\$80.00	
FT-8	7:00 am – 5:00 pm	Ferns of the Central Texas Area\$85.00	
FT-9	7:30 am – 5:00 pm	Bryophytes and Lichens of the Texas Hill Country\$75.00	
FT-10	6:30 am – 8:00 pm	Jewel of the Post Oak Belt: Bogs and Xeric Sands of the Gus	
		Engeling WMA\$120.00	
	ng Trips ay, August 15 8:00 am – 12:00 pm	Wild Basin Wilderness Preserve\$30.00	
Tuesda FT-12	ay, August 16 8:00 am – 12:00 pm	Lady Bird Johnson Wildflower Center: Plant Conservation,  Landscape Restoration, and Information Networking\$30.00	
Wedne	sday, August 17		
FT-13	8:00 am – 12:00 pm	A Brief Introduction to the Balcones Escarpment Flora: Balcones Canyonland Preserve	
	onference Trips		
Thursd	<i>3</i>	ust 18 - 20; 3 days - 2 nights	
FT-14 FT-15		ay - return early evening Saturday  Big Bend National Park	

# Pre-Conference Trips Saturday, August 13

#### 

Saturday, August 13 Time: 8:00 am – 4:00 pm

Trip Leader: Mark W. Bierner, The University of Texas, bierner@mail.utexas.edu

Limit: 30 Lunch Included

Palmetto State Park, named for the dwarf palmetto (Sabal minor) found in its swamps, is an unusual botanical area that resembles the tropics more than Central Texas. It is a 270-acre riparian refuge located where the ranges of eastern and western species merge, resulting in very diverse local flora and fauna. Gonzales, established in 1825, was the farthest west Anglo settlement until the close of the Texas Revolution. In 1831, the Mexican government sent six-pound cannon to Gonzales as protection against the Indians. This cannon was used in



the "Come and Take It" Battle on October 2, 1835, when the first shot of the Texas Revolution was fired. A few months after the first shot, men and boys from the region gathered in Gonzales and sent the only reinforcements ever received at the Alamo.

In a state known for outstanding barbeque, few places can surpass Kreuz Market, located in Lockhart. For lunch you will enjoy beef brisket, pork chops, sausage,

and (or) ribs served on elegant sheets of butcher paper. Water will be provided for the Palmetto State Park visit. You should bring a pack, sunscreen and insect repellent, and wear comfortable walking shoes, a hat, and sunglasses. Birders might want to bring binoculars, and don't forget your camera.

El Marko Note: You might need a brewski or twoski to "warsh that BBQ on down" and a lot of soap and water when you're done to "rinch your hands."

# Sunday, August 14

#### FT-2 Useful Wild Plants of McKinney Falls State Park ......\$40.00

Sunday, August 14

Time: 8:00 am - 12:00 noon

Trip Leaders: Scooter Cheatham and Lynn Marshall, Useful Wild Plants, Inc., info@usefulwildplants.org

Limit: 20

Lunch: Not included

The Useful Wild Plants (UWP) Project sets a standard for studying plant uses throughout the world. The multi-volume work titled The Useful Wild Plants of Texas, the Southeastern and Southwestern United States, the Southern Plains, and Northern Mexico is the definitive economic botany study for the southern half of the United States and northern Mexico. More than three decades of intensive interdisciplinary research have gone into the project, and nothing comparable has been done elsewhere. The first goal of the project is to complete and publish a comprehensive 12-volume encyclopedia that describes more than 4,000 Texas plants, discusses in detail their past, present, and future value, and provides color photographs and distribution maps for each species.

McKinney Falls State Park, with its miles of hiking trails and variety of habitats, provides an ideal setting for a Useful Wild Plants trek. A brief walk toward the falls opens up to an expansive floor of limestone and volcanic rock dating back some 80 million years.

Large trees in this area include Bald Cypress (Taxodium distichum), Pecan (Carya illinoiensis), Arizona Walnut (Juglans major), and Soapberry (Sapindus saponaria). Along the trail are rock shelters that were once used by Native Americans. Remains of less primitive living are down the trail, where parts of the Thomas McKinney homestead and Grist Mill still stand.

Water will be provided. You should bring a pack, sunscreen and insect repellent, and wear comfortable walking/hiking shoes, a hat, and sunglasses. Birders might want to bring binoculars, and don't forget your camera.



# Sunday, August 14

#### FT-3 B & V - Botany and Vino Pedernales Falls State Park and Becker Vineyards ...... \$64.00

Sunday, August 14 Time: 8:00 am – 4:00 pm

Trip Leader: Mark W. Bierner, The University of Texas, bierner@mail.utexas. edu

Limit: 30 Lunch Included

The Pedernales River is the focal point of the park, but trails pass through upland areas with oak (Quercus buckleyi and Quercus fusiformis) and juniper (Juniperus ashei) woodlands and lowland drainage areas heavily wooded with pecan (Carya illinoinensis), elm (Ulmus crassifolia), sycamore (Platanus occidentalis), walnut (Juglans micro-



carpa), and hackberry (Celtis laevigata). Ash (Fraxinus texensis), buttonbush (Cephalanthus occidentalis), and bald cypress (Taxodium distichum) grow on the terraces adjacent to the river. The park is home to the endangered Golden-cheeked Warbler (Dendroica chrysoparia) from March through July and the indigenous Rufouscrowned Sparrow (Aimophila ruficeps) year-round. Becker Vineyards was established in 1992 on a site of native Mustang grapes (Vitis mustangensis). Forty-six acres of French vines with sixteen different varietals were planted in a mixture of deep sand and are watered with water welled from limestone formations 300 feet beneath the surface. The winery, located in a 19th century German stone barn reproduction and surrounded by grazing quarter horses, peach orchards, and fields of native wildflowers and lavender, is 10,040 square feet with a storage capacity of 64,000 gallons and fermenting capacity of 35,000 gallons.

In addition to tours and wine tasting, we will enjoy a box lunch picnic on the grounds of the vineyard. Water will be provided for the Pedernales Falls State Park visit. You should bring a pack, sunscreen and insect repellent, and wear comfortable walking shoes, a hat, and sunglasses. Birders might want to bring binoculars, and don't forget your camera.



El Marko Note: The Claret at Becker Vineyards "drinks on down real good."

#### 

Sunday, August 14 Time: 9:00 am – 4:00 pm

Trip Leader: Jackie M. Poole, Texas Parks & Wildlife Dept., Jackie.Poole@tpwd.state.tx.us

Limit: 20 Lunch Not Included

Large spring-fed rivers between Austin and San Antonio are important to Texas botany: the "Father of Texas botany",

Ferdinand Lindheimer, lived on the banks of one (the Guadalupe River at New Braunfels), and the very rare Texas wild rice (*Zizania texana*) continues to hold on in another (the Comal River, at San Marcos). They are also a great place to cool off on a Texas summer afternoon.

This field trip, led by Texas Parks & Wildlife Dept. rare plant botanist Jackie Poole, will first go to New Braunfels to visit the Lindheimer Home, where Lindheimer lived for decades in the 1800s while botanizing and publishing the local German-language newspaper. Then, following an early lunch, the group will proceed to the San Marcos River to "tube" the uppermost part just below the springs. ("Tubing" is floating down the river in inner tubes, in swimming suits.) You'll get to see *Zizania texana* and other aquatics while Jackie explains the ecology and multiple conservation problems of aquifer-fed aquatic ecosystems in central Texas and the specific problems of the Texas wild rice.

Bring swimming suits or shorts, T-shirt, and (extra) shoes you can get wet and dirty for tubing (these are necessary!), and sun protection (sunscreen, hat, and/or wet-able shirt etc.); rustic clothes-changing facilities are available at tube-rental. Water will be provided.



#### 

Sunday, August 14 Time: 8:00 am – 4:00 pm

Trip Leader: Bill Carr, The Nature Conservancy of Texas,

bcarr@tnc.org

Limit: 10

Lunch on your own

Nature Conservancy botanist Bill Carr will lead a small group onto the private Halifax Ranch along the Blanco River in Blanco County. This 3300-acre ranch is home to about 400 plant taxa, including 17 Texas endemics, 1 globally-rare (G2) shrub, 6 quasi-rare (G3) taxa), and at least 10 oddball disjuncts / regional rarities. The area includes typical upland Edwards Plateau vegetation on limestone, but of especial interest are the lovely canyons along and near the Blanco River. Major habitats include mesic limestone canyons, xeric southfacing cliff faces, spring / seep zones, and sandy river terraces /gravel bars maintained by a major flood-prone stream.

The hike will not be strenuous and will be mostly in the morning, but heat can nonetheless be intense, so hats, sunscreen, and a small daypack to carry water (provided) will be needed. Footware appropriate for rough, rocky terrain should be worn, but walking shorts will be OK. There will be the opportunity to cool off in the river near the end of the walk for those so inclined. Lunch will follow at a typical Texas barbecue restaurant (vegetarian available) before returning to Austin mid-afternoon.

#### FT-6 Balcones Canyonlands Limestone Grotto and Canyon Flora: Hamilton Pool and West Cave ......\$72.00

Sunday, August 14 Time: 8:00 am – 4:00 pm

Trip Leader:: Mark Mayfield, Kansas State University, markherb@ksu.edu

Limit: 25 Lunch Included

The dissected eastern and southern edges of the limestone Edwards Plateau are known as the Balcones Canyonlands. The canyons of this area harbor a fascinating combination of endemic, disjunct, and widespread species that add to the already unique Edwards Plateau flora of surrounding uplands. In some areas, perennial springs give rise to streams that plunge over limestone cliffs into beautiful mesic "grottos" with plunge pools and narrow canyons downstream. This tour will visit two such areas in far western Travis County near the Pedernales River. After a stop along a beautiful section of the Pedernales River, the group will take a tour of the canyon woodland and grotto of the small West Cave Preserve. The rest of the day will be spent at the larger Hamilton Pool county park, which includes a very large plunge pool (a favorite local

swimming hole—participants so inclined are welcome to take advantage of it) and a perennial stream in a wooded canyon with a good trail that runs nearly a mile down to the river. Relatively easy walking. Birding can be good here. Participants should bring hats, sunscreen, small day-packs to carry water (which will be provided), and sturdy walking shoes

# FT-7 Early Tertiary Floras of Central Texas ......\$80.00

Sunday, August 14 Time: 8:00 am – 5:00 pm

Trip Leader: Gary Upchurch, Texas State University, San Marcos, gu01@txstate.edu

Limit: 20 Lunch Included

The Early Tertiary (Paleocene–Eocene) had the warmest temperatures of the past 65 million years. During the Early Tertiary tropical and paratropical forests were widespread in the southeastern US. These forests showed a diversity of taxa typical



of modern tropical and subtropical floras, such as Lauraceae, woody Fabaceae, and Arecaceae, intermixed with elements typical of modern temperate floras, such as Fagaceae. Early Tertiary floras from the southeastern US have been and continue to be the subject of much research on leaf systematics and paleoclimate. Leaf megafossils from some localities are noteworthy for their preservation cuticular anatomy and epiphyllous fungi.

We will collect leaf megafossils from one or more localities in the Wilcox Group of central Texas to sample the diversity of these forests. Participants should bring a rock hammer, backpack, and other collecting gear, and are urged to wear jeans, boots, sunscreen, insect repellant, and a hat. Newspaper, tissue, acrylic plastic spray, boxes, and drinking water will be provided. Participants should come prepared for high temperatures, bright sun, and possible encounters with snakes and insects.

#### FT-8 Ferns of the Central Texas Area .... \$85.00

Sunday, August 14 Time: 7 am – 5:00 pm

Trip Leaders: Jim Blassingame, South Plains College; Jack Stanford, Howard Payne College; Laura Sánchez, Natural Resources, Fort Hood, Laura.L.Sanchez@us.army.mil

Limit: 25 Lunch Included

We will visit two sites representing two different ecoregions in the central Texas area. Our first stop will be Inks Lake State Park, in the Llano Uplift region. This is an area of pink granite

outcroppings with a unique flora. Some species that we will see here include Astrolepis sinuata, Cheilanthes lindheimeri, Cheilanthes tomentosa, Pellaea ovata, Pellaea wrightiana, Isoetes lithophila, Isoetes melanopoda, Selaginella arenicola, Selaginella peruviana, and Woodsia obtusa. After lunch we will go on a tour of West Cave Preserve, which is in the Canyonlands of the Edwards Plateau. At West Cave, we will visit a sheltered limestone canyon that has a 40 foot waterfall. Some species that we will see here include Adiantum capillus-veneris, Anemia mexicana, Argyrochosma dealbata, Cheilanthes alabamensis, and Thelypteris ovata. You will need to wear sturdy shoes and bring a hat, sunscreen, and insect repellant, and a small day pack to carry water, which will be provided.

#### FT-9 Bryophytes and Lichens of the Texas Hill Country......\$75.00

Sunday, August 14 Time: 7:30 am – 5:00 pm

Trip Leaders: Ann Rushing, Baylor University, Ann\_Rushing@baylor.edu, and Bob Egan, University of Nebraska at Omaha.

Limit: 25 Lunch Included

On this full day field trip, sponsored by the American Bryological and Lichenological Society, we will travel by bus to various localities near Austin representative of central Texas habitats, including Bastrop State Park and Hamilton Pool County Park. Bryophytes and lichens will both be observed during the trip. Limited collecting may be permitted in state parks. Temperatures in Texas in August may reach  $100^{\circ}\text{F}$  by mid-afternoon. Participants should bring sunscreen and wear comfortable hiking shoes and cool clothing.

#### 

Sunday, August 14 Time: 6:30 am – 8:00 pm

Trip Leaders: Walter Holmes, Baylor University, Walter\_Holmes@baylor.edu, and Jason Singhurst, Texas Parks & Wildlife Dept., Jason.Singhurst@tpwd.state.tx.us

Limit: 20

Lunch included, dinner on your own on the way back

The furthest-west well developed bogs in Texas occur in the post oak belt, which is in many ways the transition from East Texas to Central Texas. Texas's well known and unique sandyland flora is also well developed in parts of the area. The two botanists who perhaps know this area the best will take participants to see both floras at the Gus Engeling Wildlife Management Area, a true botanical jewel near Palestine, Texas. Upon arrival, we will take a small walk through a beautiful natural post oak savanna hillside seepage bog.

Lunch around noon will find us at the Beaver Pond board walk/ observation platform. Then we will walk through the Carrizo Sand Formation Xeric flora, merging into the edge of the large Andrew's Quaking Bog. The bog flora at the WMA includes at least 130 species, including the rare Chapman's yellow eyed grass (Xyris chapmanii) and endemic roughstem aster (Aster pu-

niceus subsp. scabricaulis), while the xeric sand hill flora has over 100 species, including Mohlenbrock sedge (Cyperus grayioides) and rough seed flame flower (Talinum rugospermum), which will be flowering just as we depart. A total of 931 species have been documented for the WMA.



We will have supper in a restaurant on the drive back to Austin. Notes: The Gus Engeling

WMA is close to 4 hours drive from Austin, so this will be a quite long day, but worth every minute of it! The distance not only means that almost 8 hours will be spent on the road, but also that the botanizing will be from 10:30 am until about 3 pm, quite hot parts of the day, and in largely unshaded habitats. Abundant water will be provided (bring a small daypack to carry water), but participants should come prepared for intense sun and heat: hats, sunscreen, and other sun-wear. Footware appropriate for boggy ground is recommended.

### Monday

#### FT-11 Wild Basin Wilderness Preserve ... \$30.00

Monday, August 15

Time: 8:00 am – 12:00 noon

Trip Leaders Contact Information: Mark W. Bierner, The University of Texas, bierner@mail.utexas.edu

Limit: 30

Lunch not included

Wild Basin Wilderness Preserve is an urban natural area that was founded in 1974 to protect 227 acres of pristine Texas Hill Country and to provide nature education programs. Two and one-half miles of hiking trails pass through woodland, grassland, and streamside habitats, home to hundreds of native plants and animals.

Trails meander through Spanish Oak (Quercus buckleyi) and Ashe Juniper (Juniperus ashei) woodlands down to a waterfall, plunge pool and riparian forest with tall cottonwoods (Populus deltoids), sycamores (Platanus occidentalis), and willows (Salix nigra). Wild Basin is also home to two endangered species of bird, the Black-capped Vireo (Vireo atricapillus) and the Golden-cheeked Warbler (Dendroica chrysoparia), which nest there from March/April through July.

Water will be provided. You should bring a pack, sunscreen and

insect repellent, and wear comfortable walking/hiking shoes, a hat, and sunglasses. Birders might want to bring binoculars, and don't forget your camera.

El Marko Note: Insect repellent is a good thing "because them Texas skeeters'll darn near tote ya' off."

# Tuesday, August 16

FT-12 Lady Bird Johnson Wildflower Center Plant Conservation, Landscape Restoration, and Information Networking ..... \$30.00

Tuesday, August 16

Time: 8:00 am - 12:00 noon

Trip Leader: Damon Waitt, Lady Bird Johnson Wildflower

Center, dwaitt@wildflower.org

Limit: 30

Lunch Not Included

Founded in 1982 by Lady Bird Johnson and the late Helen Hayes, the Lady Bird Johnson Wildflower Center is dedicated to protecting and preserving North America's native plants and natural landscapes. The mission of the Wildflower Center is to educate people about the environmental necessity, economic value, and natural beauty of native plants.



The grounds include several hundred species of plants native to the Edward's Plateau in naturalistic, traditional and formal designs, and one and a half miles of interpretive trails through an oak-juniper savanna and ecological restoration laboratory.

Your behind scenes tour will be led by three of the Wildflower Center's senior staff: Dr. Damon Waitt, Senior Botanist and Director of the National Plant Information Network, Dr. Steve Windhager, Director of Landscape Restoration, and Flo Oxley, Education Director and Conservation Scientist.

Water will be provided. You should bring sunscreen and insect repellent, and wear comfortable walking shoes, a hat, and sunglasses. Birders might want to bring binoculars, and don't forget your camera.



### Wednesday, August 17

Wednesday, August 17

Time: 8:00 am - 12:00 pm

 $Rose Farmer, Travis County Balcones Canyon lands Preserve, and Tom Wendt, Curator TEX/LL. \ Email: twendt@mail.utexas.edu$ 

Limit: 25 Lunch: No

Austin spreads out directly over the Balcones Fault, the ancient and inactive geological fault that forms the eastern edge of the Edwards Plateau, and the resultant escarpment is called the Balcones Escarpment or Balcones Canyonlands. The canyons of this area harbor a fascinating combination of endemic, disjunct, and widespread species that add to the already unique Edwards Plateau flora of surrounding uplands and the karst caves that are home to a number of endemic invertebrates. The Balcones Canyonlands Preserve is an extensive coordinated patchwork of preserved land owned by public and private entities including the City of Austin, Travis County, Lower Colorado River Authority, Nature Conservancy of Texas, Travis Audubon Society, as well as private landowners, and is one of the country's largest urban/suburban preserves; many of its lands, including the areavisited on this trip (owned by Travis County), can be visited only by previous arrangement.

We will walk through an excellent example of a limestone canyon, enjoying the beautiful canyon woodland while seeing endemic plants and discussing the role of the Preserve in this rapidly growing urbanarea. For this two-hour easy walk, participants should bring hats, sunscreen, and small day-packs to carry water (which will be provided).

# Post Conference Thursday - Saturday

FT-14 Big Bend National Park.....\$300.00

Leave 7:00 am Thursday - return early evening Saturday Trip Leader: Joe Sirotnak, Big Bend National Park, Joe\_ Sirotnak@nps.gov

Limit: 10

Some meals included

Big Bend is one of the largest (800,000 acres) and least visited of America's national parks. From an elevation of less than 2,000 feet along the Rio Grande to nearly 8,000 feet in the Chisos Mountains, Big Bend includes massive canyons, vast desert expanses, and the entire Chisos Mountain range. Big Bend has national significance as the largest protected area of Chihuahuan Desert in the United States, and few areas exceed the

park's value for the protection and study of geologic and paleontologic resources. Cretaceous and Tertiary fossils exist in variety and abundance, archeologists have discovered artifacts estimated to be 9,000 years old, and historic buildings and land-

scapes offer graphic illustration of life along the international border at the turn of the century. The park exhibits dramatic contrasts in climate and elevation, contributing to an exceptional diversity in plant and animal habitats. The park is home to



more than 1200 species of plants (including approximately 60 cacti species), 11 species of amphibians, 56 species of reptiles, 40 species of fish, 75 species of mammals, 450 species of birds, and about 3600 species of insects. The park boasts more taxa of birds, bats, and cacti than any other national park in the United States. For more information about Big Bend, visit www.nps. gov/bibe. Water will be provided for hikes. You should bring a pack, sunscreen and insect repellent, and wear comfortable walking/hiking shoes, a hat, and sunglasses. Birders might want to bring binoculars, and don't forget your camera.

#### FT-15 Texas Subtropics: "The Valley" ... \$300.00

Leave 7:00 am Thursday - return early evening Saturday Time: 8 AM departure

Trip Leaders: Robert Lonard, University of Texas--Pan American, rlonard@panam.edu, and Tom Patterson, South Texas Community College, tfpatt@stcc.cc.tx.us.

Limit: 10 Some Meals Includsed

The lower Rio Grande Valley of South Texas includes vegetation types, plant species, and birds found nowhere else in the United States. Although highly modified by agriculture and urbanization, fascinating remnants remain that will be visited on this trip. We will drive from Austin to near mouth of the Rio Grande at the Gulf of Mexico, and then work our way from the coast upriver. Exactly which localities we will visit will depend on what kind of year the Valley has had (wet or dry), and whether it is raining or not when we are there—but under any combination, we will see botanical treasures. The first night we will stay in Brownsville, and that afternoon and the next morning we will visit nearby localities. Prime spots are Boca Chica, the Sabal Palm Audubon Center and Sanctuary, the Southmost Nature Conservancy Preserve, and the Palo Alto Battlefield National Historic Site. Boca Chica, on the coast, includes coastal sand dunes, clay dunes vegetated by Tamaulipan coastal scrub, and other saline communities; the area is rich in shore and other birds. The Sabal Palm Preserve and the Southmost Preserve harbor remnants of one of the most critically endangered ecosystems in the US, the lower Rio Grande alluvial flood plain forest, characterized by a mosaic of sabal palm (Sabal mexicana) groves, Texas ebony (Pithecellobium ebano) thorn forests, bottomland and riparian forests, and resacas (poorly drained areas representing old river channels), with many Mexican species found nowhere else in the United States. Rarest of these vegetation types are the sabal palm groves; these palms once grew profusely along the edge of the Rio Grande in small stands or groves extending about 80 miles upstream from the Gulf of Mexico, but today only a small portion of that forest remains, protected in these two preserves. The Palo Alto Battlefield is botanically interesting and includes nice examples of resaca and native thornscrub vegetation—and it is also fascinating as the locale of the first military engagement of the Mexican American War (May 8, 1846). Plant species known in the U.S. only from the Valley may be seen at any of these sites.

Mid-day on the second day we will drive upriver in order to visit Santa Ana National Wildlife Refuge late in the day; that night we will stay in McAllen nearby. The 2088-acre refuge is bounded by the Rio Grande; this jewel of the refuge system is an 'island' of thorn forest habitat is host or home to nearly 400 different types of birds and about one half of all butterfly species found in the United States. Both here and at the preserves visited the previous day, many Mexican bird species can be seen, including buff-bellied hummingbird, plain chachalaca, groove-billed ani, pauraque, green jay, etc. The third morning, before returning to Austin, we will proceed further upriver to drier uplands overlooking the river in Starr County to visit particularly rich examples of typical South Texas "brush" communities (Tamaulipan thornscrub, dominated by Acacia rigidula), as well as a barretal community. Barretal, a shrub community dominated by Helietta parviflora, is common further south in Mexico, but is found in the United States only on a few bluffs in this area. We may also stop by a locality of the rare Manihot walkerae.

Heat can be very intense in the Valley in August, especiallyestward (away from the Gulf); daily highs can easily be over 100 degrees. Hats, protective clothes, and sunscreen are necessary; sun glasses are highly recommended. Good boots that provide protection from spines and rattlesnakes are a must. You will need a small daypack for water (provided). Binoculars (especially for birders) are highly recommended, as well as swimming suits for evening dips at the motel. Boca Chica is extremely sandy so an extra pair of "knock-around" shoes for there might be a good idea.

The field trip leaders, Bob Lonard and Tom Patterson, between them have over four decades of experience studying the flora and vegetation of South Texas.



# EDUCATIONAL AND SCIENTIFIC WORKSHOPS

All workshops are FREE, but are ticketed events. Tickets may be ordered while registering and will be included in the registration packet. If you participate in a Workshop(s) before acquiring your registration packet, bring your registration confirmation notice so that you have a record of your ordered ticket. All workshops will be held in the Hilton on Sunday, August 13. Check your tickets for the Workshop locations.

All Workshops are sponsored by the Botanical Society of America in conjunction with the workshop providers A limited number of seats are available - Register early

Full Day

W-1 8:00 am - 5:00 pm Writing floristic treatments: a workshop for authors, based on the Flora North America experience

All Morning - 4 Hour

W-2 8:00 am - 12:00 pm Activities & Ambassadors: Using Living Collections to Teach Schoolchildren through

Field Trips

W-3 8:00 am - 12:00 pm Keep Your Biology Class Alive with Fast Plants

Early Morning - 2 Hour

W-4 8:00 am - 10:00 am Technical Writing I

W-5 8:00 am - 10:00 am Teaching Through Inquiry including an introduction to BSA Sci-π

Late Morning - 2 Hour

W-6 10:15 am - 12:15 pm BSA Sci-π: Seeds of Change in the Classroom

Late Morning - 1 Hour

W-7 11:00 am - 12:00 pm Writing for ESL Authors

All Afternoon - 4 Hour

W-8 1:00 pm - 5:00 pm Implementing a Cooperative Group Learning Environment in Hands-On Biology

Labs for Non-majors: Lessons from the Trenches

W-9 1:00 pm - 5:00 pm The Tree of Life

W-10 1:00 pm - 5:00 pm C-Ferns in the Classroom

Early Afternoon - 2 Hour

W-11 1:00 pm - 3:00 pm Technical Writing II

# W-1 Writing floristic treatments: a workshop for authors, based on the Flora North America experience.

Time: 8:00 am - 5:00 pm

Presenter: Dr. Nancy R. Morin, The Arboretum at Flagstaff, 4001 S. Woody Mountain Road, Flagstaff AZ 86001 U. S. A., Phone: 928-774-1442 ext. 104, Fax 928-774-1441, email: Nancy.Morin@NAU.EDU, and the Flora of North America Association

This workshop will sharpen authors' skills in preparing and writing treatments for major floristic projects such as the Flora of North America project. Included will be considerations for consulting herbarium specimens, on how to organize information for large taxa, on nomenclature and bibliography, and on how to provide information for illustrators. Furthermore, the entire editorial process (used by FNA) as it affects authors will be covered, from initial submission through composition. The workshop is open to all authors of floristic treatments, actual or prospective, even though the emphasis will be on FNA approaches. Participants are encouraged to review the latest FNA Guide for Contributors, as it appears on the FNA web site.

# W-2 Activities & Ambassadors: Using Living Collections to Teach Schoolchildren through Field Trips.

Time: 8:00 am - 12:00 pm

Presenter(s): Matthew Cole, Director of Education, Green Bay Botanical Garden, PO Box 12644, Green Bay WI 54307-2644, V: (920) 491-3691, F: (920) 490-9461, mcole@gbbg.org

The living collections in college and university gardens, greenhouses and arboreta can be a great resource for schools. Through field trips and public visits, you can promote the importance of your work, the mission of your institution, Botany, Science and the beauty of the plants themselves. School groups can be your outreach to the community, give your students experience in teaching or even serve as a revenue stream, but today's school teachers have specific needs. Teaching to standards or benchmarks alone may not convey the value of your collection or the excitement students can find in plants. Learn how to make your collections (and botany) accessible to visitors through an Ambassadors and Activities field trip model. After exploring examples, participants will have a chance to work on tours that would fit their own institution. If they choose, participants can develop an outline for Ambassadors and Activities visit appropriate for their collection.

# EDUCATIONAL AND SCIENTIFIC WORKSHOPS

# W-3 Keep Your Biology Class Alive with Fast Plants

Time: 8:00 am - 12:00 pm

Presenters: Paul H. Williams, Atwood professor emeritus, Univ. of Wisconsin-Madison & WFP Program Director, Wisconsin Fast Plants Program • University of Wisconsin – Madison Science House • 1630 Linden Drive • Madison, WI 53706 Phone: 1-800-462-7417, www.fastplants.org

Dan Lauffer, WFP Assistant Director

Coe Williams, WFP Program

Students grasp the concepts working with a life cycle of Fast plants; portable take-home experiments; techniques for producing your own seed; variation, inheritance and evolution; meet the home team of Fast Plants, known for their intensive, hands-on workshops.

#### W-4 Technical Writing I

Time: 8:00 am - 10:00 pm

Presenter: Beth E. Hazen, Production Editor, American Jour-

nal of Botany

Learn how to tighten and polish your writing, conquer the comma, identify "red flags," and more. Pertinent grammar, punctuation, terminology and word usage, style, tables and figures. Emphasizes frequent problems and examples from manuscripts submitted for publication.

Receive reference handbook written for plant scientists, expands on workshop topics, includes problems and writing resources, premailed to participants for review and problem solving Note: You do not need to attend Technical Writing II to take part in this workshop.

# W-5 Teaching Through Inquiry including an introduction to BSA Sci -π

Time: 10:00 am - 12:00 pm

Presenter: Gordon Uno, University of Oklahoma, E-mail:

guno@ou.edu

Inquiry, which has been recognized as the method to drive science education reform, helps students discover and construct an understanding of scientific concepts on their own under the guidance of the instructor. This workshop will introduce participants to different kinds of inquiry and the general techniques of inquiry instruction using a variety of short, hands-on activities and information about the Introductory Botany course at the University of Oklahoma, which is taught using this method. In addition, participants will learn how to develop "discovery" activities on their own and how to make traditional laboratories more inquiry-oriented. We will also address the most common problems in teaching biology today, with suggestions and examples of how to deal with or overcome these problems. This workshop will introduce participants to a new biology education initiative from the American Institute of Biological Sciences (AIBS); ideas for the initiative will be solicited.

# W-6 BSA Sci -π: Seeds of Change in the Classroom

Time: 10:15 am - 12:15 pm

Presenter(s): Bill Dahl, Beverly Brown, Claire Hemmingway,

The Botanical Society of America

The Sci- $\pi$  project, recently initiated by the Botanical Society of America, provides an innovative and well-resourced way to address common standards of learning for science using plants. The project involves the hands-on approach of sprouting seeds to teach inquiry and the scientific process. In this project, students conduct experiments on seed germination and seedling growth, and receive feedback from peers and plant scientists. Classes across the country will be linked via a web site that facilitates discussions among students at multiple levels, including middle school, high school, and undergraduates. When students have more advanced questions, experts in the field are available. The web site includes a "Teachers Only" section where teachers can share successful approaches and access detailed supporting material for both the botanical content and using a guided inquiry or inquiry-based approach. The project is low cost and does not require specialized equipment. The activity addresses several of the National Research Council's National Science Education Standards including life cycles of organisms, structure and function in living systems, reproduction and heredity, diversity and adaptations of organisms, and interdependence of organisms. There are also many ways to create interdisciplinary links, particularly with mathematics and chemistry. It is our hope that by attending this workshop you will see the benefits of participating in our on-line scientific exchange and bring the excitement of experimenting with sprouts to your classrooms.

#### W-7 Writing for ESL Authors

Time: 11:00 am - 12:00 pm

Presenter: Beth E. Hazen, Production Editor, American Journal

of Botany

Articles and prepositions for authors whose native language is not English.



# EDUCATIONAL AND SCIENTIFIC WORKSHOPS

#### W-8 Implementing a Cooperative Group Learning Environment in Hands-On Biology labs for Non-majors: Lessons from the Trenches

Time: 1:00 pm - 5:00 pm

Presenter: Dr. Staria Vanderpool, Department of Biological Sciences, Arkansas State University, State University, AR

72467. Phone: 870 972 3082, FAX 870 972 2638;

Email: svand@astate.edu

A hands-on workshop for people who may be considering modification of lab experiences for non-majors biology lab from a traditional confirmatory/demonstration model to an investigative model. Our non-majors biology program is typical of mid-size and large institutions, with high enrollment of students in a required course that is staffed by graduate teaching assistants under the supervision of an instructor. Our typical annual student enrollment in the lab is 1500 students so there are significant logistical problems involved in developing, staffing, and managing an open-ended, investigational laboratory environment. Solutions to some of these problems include using a cooperative learning method, multi-week labs, and concentration on the process of scientific investigation. Student response has been positive as we resolved implementation problems. Assessment of the effectiveness of the change indicates significant increase in the student's overall interest in science, understanding of the use of science reasoning, and the role of science in non-science careers, thus validating the role of laboratory sciences as part of the general education component of the undergraduate degree program.

#### W-9 The Tree of Life

Time: 1:00 pm - 5:00 pm Presenters: Brent D. Mishler, Director, University and Jepson Herbaria and Kirsten M. Fisher, Dept of Integrative Biology, University of California, Berkeley



Reconstructing the tree of life is evolutionary biology's greatest challenge. This workshop will provide an introduction to the concepts behind "tree thinking" and phylogenetic principles, and will review our most current understanding of the overall tree of life. We will introduce the basic methods of phylogenetic analysis and conduct a hands-on demonstration of classroom exercises appropriate for grades 9-12 and introductory university level biology classes. The green plants are emphasized, because of their utility in teaching these concepts, but the workshop will also introduce the general principles behind the algorithms that are used to build phylogenetic trees in computer analyses, and will provide an interactive demonstration of computer-based tree reconstruction. These basic exercises will provide the basis for understanding the principles behind reconstructing the tree of life, and we will discuss the practical importance of understanding the evolutionary relationships of organisms.

Sponsored by three National Science Foundation supported projects: Deep Gene, The Green Tree of Life and CIPRES

# W-10 C-Ferns in the Classroom

Time: 1:00 pm - 5:00 pm

Presenter(s): Whitney Crispen Hagins, Lexington High

School, Lexington, MA 02421

C-FERN of Ceratopteris is a genus of ferns that are found in many tropical and subtropical regions. They are an ideal model plant system for teaching many aspects of botany and genetics. The concept of alternation of generations actually comes alive with C-ferns since the students can see each of the generations and follow their development. Students can see the chemotactic response of sperm swimming towards the archegonia. Genetic exercises with C-FERN actively involve students in acquiring data, testing hypotheses and manipulating the organism. For example, students can follow a trait that is expressed phenotypically in 2 distinct generations (gametopyhte and sporophyte). After collecting data on F1 segregation in the gametophyte generation, students initiate and visualize fertilization by adding water to the cultures. C-FERNS are easily grown in the classroom with minimal equipment. Their relatively short life span makes them ideal organisms for student investigations. Participants will learn how to grow C-FERNS and will receive copies of investigations.

#### W-11 Technical Writing II

Time: 1:00 pm - 3:00 pm

Presenter: Beth E. Hazen, Production Editor, American Jour-

nal of Botany

Learn how to tighten and polish your writing, conquer the comma, identify "red flags," and more. Pertinent grammar, punctuation, terminology and word usage, style, tables and figures. Emphasizes frequent problems and examples from manuscripts submitted for publication.

Receive reference handbook written for plant scientists, expands on workshop topics, includes problems and writing resources, premailed to participants for review and problem solving.

Note: You do not need to attend Technical Writing I to take part in this workshop.



# Local Tours

Several local tours of the Austin area have been planned to enhance the conference program. Tour fees include transportation, entrance fees and lunch as indicated. Ticket prices are the same for adults and children. Tours require a minimum number of participants. All tours will depart from the lobby of the Hilton. Please read the Refund and Cancellation Policy. Companion tours are ticketed events; tickets may be purchased while registering in advance and will be included in the registration packet. On-site registration may not be available.

#### LT-1 Have a Capitol Day ......\$35.00

Monday August 15th Time: 9:30 am - 3 pm

A Capitol idea for an outing – an insider's view of the capitol of the great Lone Star State. Enjoy a look into where our Texas legislature meets, and learn the history of our government and about some of the famous and infamous Texas politicians who have walked these hallowed halls.

Our tour offers a stop at the State Capitol Building and Visitors Center. The State Capitol Building, which was completed in 1888, is currently the third building to serve as the Capitol. It was constructed of red granite taken from Granite Mountain near Marble Falls, Texas and modeled after the classical style of our Nation's Capitol.



The height of the dome is 309 feet, over seven feet higher than the United States Capitol. We will also drive by The Governor's Mansion. This is one of the oldest buildings in the complex, completed in 1856, and one of the oldest in the city.

The history of the Ransom Center officially began in 1957, when the U.T. Vice President and Provost Harry Huntt Ransom founded the Humanities Research Center at The University of Texas at Austin. Today its major emphasis is on the study of culture of the United States, Great Britain and France. The Center's collections contain some 30 million leaves of manuscripts, over one million rare books, five million photographs, photographic equipment and 100,000 works of art. Highlights include the Gutenberg Bible (circa 1455) the world's first photograph (circa 1826), important paintings by Frida Kahlo and Diego Rivera. The Center is used extensively for research by scholars from around the world and offers everchanging exhibitions and events.



For lunch-on-your-own, we will head to Congress Avenue, crossing the river to legendary Hill's Café for a Texas lunch under 100 year-old oak trees. Open since 1947, the atmosphere is only matched by the great home cooking! The Musician's Museum is an extra treat, almost as good as dessert!

#### LT-2 Texas Legends & Lore..... \$40.00

Tuesday August 16th Time: 9:30 am - 3 pm

Yes, everything really is bigger in Texas - if you don't believe it, just asks a Texan. We begin with the Story of Texas, The Bob Bullock Texas State History Museum. A most magnificent museum honoring the memory of one of Texas' legendary politicians, Bob Bullock, as well as paying tribute to the deep love he had for his home state!

This museum exemplifies the bigger than life persona of Texas and Texans. There are a variety of fun and whimsical displays that depict Texas Valor, Vision, Pride, Perseverance, Swagger and Showmanship!

We will experience the Texas Spirit Theatre located on the second floor which is a multimedia event entitled "The Star of Destiny". Your guests will feel the fury of the hurricane that



rocked the Gulf Coast, experience the heat of the explosions that flattened the entire city and their hearts will rumble with the lightening and thunder from the Texas prairie lands. The ghost of Texas' history leads you through a one-of-a-kind adventure.

The museum is also home to the best lil' kitchen in the Lone Star State, The Story of Texas Café, where tasty snacks and mighty fine lunches are the fare.

What bigger Texas Legend than the late President Lyndon Baines Johnson? The Lyndon Baines Johnson Library and Museum on the University of Texas Campus houses Johnson's desire to "show the facts, not just the joy and triumphs, but the sorrow and failures too". This incredible facility is one of eleven Presidential libraries administered by the National Archives and Records Administration. Displays include the landmark Civil Rights Programs, the war in Vietnam and many other historical events which took place during the Johnson administration.



# Local Tours

LT-3 Shop 'til you Drop!.....\$35.00

Wednesday, August 17th Time: 10 am – 4pm

If shopping is your bag, then this tour is as good as it gets! Our first stop, Prime Outlets at San Marcos, offers more – more brands, more selection and more value! The Center's inviting landscaping and hacienda-style architecture make shopping in the more than 115 most famous name-brand outlets a buyer's bliss! Enjoy lunch on your own at one of the 15 restaurants in the center. With names such as Guess, Tommy Hilfiger, SAS Shoes, Coach, Dooney and Bourke, Gap and Samsonite to name just a few, a day of sensational shopping is a sure thing! Whether shoes, clothing, the perfect wedding gift or a treasure, you're sure to find it here!





For a very different kind of shopping experience, we move on to Gruene, (pronounced "Green") a turn-of-the-century cotton farming community located on the banks of the Guadalupe River. This quintessential Texas town offers an assortment of antique and specialty shops, restaurants and even its own wine tasting venue. Enjoy a slower pace and investigate a treasure trove of wares at your fingertips. Stop in to visit Gruene Hall, the oldest dance hall in Texas, having had many country-singing stars and legends perform there over the years. Willie Nelson, George Strait, Jerry Jeff Walker, Lyle Lovett are some of the well-known singers who've

played here. A complete list of the singers is displayed inside the Hall which is still the best place to scoot a boot!

# SOCIETY AND ASSOCIATION EVENTS

The following society and group events require tickets. Tickets may be purchased in advance or on-site at the Registration area. Pre-paid event tickets will be included in the registration packet which will be distributed on-site Event venues will be announced on the tickets and in the Program. A limited number of tickets may be available for purchase at the Registration Desk on-site at the meeting, but availability is not guaranteed.



#### Monday, August 15

TE-1 TE-2	7:00 am - 8:30 am 12:00 pm - 1:30 pm	ABLS BreakfastAFS Luncheon			
TE-3	6:00 pm - 8:00 pm	Texas-Exes Tex Mex Reception	\$20.00		
TE-4	6:30 pm - 10:00 pm	Paleobotanical Banquet and Auction	\$35.00		
Tueso	lay, August 16				
TE-5	7:00 am - 8:30 am	Missouri Botanical Garden Breakfast	\$15.00		
TE-6	11:30 am - 1:00 pm	Economic Botany Luncheon	\$25.00		
TE-7	5:00 pm - 7:00 pm	Ohio State University Reception			
TE-8	6:00 pm - 10:00 pm	ASPT Banquet and Auction	\$40.00		
Wedn	Wednesday, August 17				
TE-9 TE-10	7:00 am - 8:30 am 7:00 pm - 9:30 pm	Miami University of Ohio Breakfast			





# STUDENT FINANCIAL OPPORTUNITIES

Student participation in Botany 2005 is critical, appreciated and supported. Several options exist to help students to defray cost in attending. Keep checking the meeting website: www.2005.botanyconference.org, for updates as new opportunities become available.

#### Undergraduate Mentoring in Environmental Biology (UMEB) Program

The Botanical Society of America (BSA) is pleased to announce the third year of a program entitled "Increasing diversity at the annual Botanical Society of America meeting." This program is supported by the National Science Foundation (Undergraduate Mentoring in Environmental Biology (UMEB) Program) and will provide financial and professional assistance for 10 minority (African-Americans, Hispanic-Americans, Native Americans/Alaskan Natives and persons with disabilities) undergraduate research students to attend the Botany 2005 conference. Through a supportive mentoring network and orientation activities, the students will be integrated into professional and social activities of the Botany 2005 conference.

UMEB Grant Application and complete information is available on the conference web site www.2005.botanyconference.org.

#### Developmental and Structural Section Student Travel Awards

Introducing - The first Vernon I. Cheadle Awards

Travel awards are available from the Developmental and Structural Section of BSA for graduate and undergraduate students to attend Botany 2005 in Austin, Texas. The awards will include the first four Vernon I. Cheadle Student Travel Awards (\$500 per award) to support student participation at Botany 2005.





Students should submit a one-page proposal that addresses her/his interests in developmental/structural botany and includes a copy of the title and abstract for the paper/poster to be presented at Botany 2005.

Students should also indicate whether he/she is member of the Developmental and Structural Section of BSA or her/his advisor is a member of the section and include an estimate of the amount of matching funding that will be available from other sources. Proposals must be submitted by 10 April 2005.

Applicantions and more information at www.2005.botanyconference.org

#### Pteridological Section Student Travel Awards

The Pteridological Section of the Botanical Society of America is pleased to announce \$250 student travel awards available to undergraduate and graduate students who will attend Pteridological Section symposia and contributed paper sessions at the Botany 2005 meetings to be held in Austin, TX, August 12-17.

For full details and an application form go to: www.2005.botanyconference.org

#### Apply to serve as a Student Projectionist

If you are interested in serving as a student projectionist, please fill out the "Application to Serve as a Student Audio-Visual Projectionist" (page 28). Please submit your application by July 15th, 2005.

#### **Dobie Center Dorms**

Botany 2005 has contracted with a private residence hall for primarily student housing at the conference. Dobie is located on the edge of the University of Texas - Austin campus and is about 2 miles away from the Hilton. More information is on page 9 of this Registration Book. Make reservations online at www.2005.botanyconference.org, directly with Botany 2005 or fax the housing form to 614-895-7866. Questions? Email: johanne@botany.org

#### Roommate matching Service

Botany 2005 will maintain a list of registrants who have submitted their names and indicated an interest in sharing a room during the conference. See page 8 of this Registratin Book for more information. Also check the conference website



# STUDENT PROJECTIONIST APPLICATION

#### Rules for serving as a student AV projectionist----Deadline for application: July 15, 2005

- 1. If you are attending scientific sessions, you must register and pay registration fees. Fee waivers are not granted.
- 2. You must attend the mandatory training session for projectionists on Sunday, August 14th, at 5:00 pm in the Hilton. Location to be announced.
- 3. You must serve as a projectionist for two to three scientific sessions, up to 10 hours of work.
- 4. Upon submission of a work form that must be signed by the moderator of your assigned scientific sessions, \$100.00 will be refunded to you after the meeting. This amount is the equivalent of fees for early student registration for the scientific meeting.
- 5. Student projectionists MUST work ALL assigned sessions to receive the refund. No partial refunds will be issued for work for less than the assigned sessions. Incomplete work assignments will result in forfeiture of the \$100.00
- 6. Scientific sessions will be assigned to you, although every effort will be made to match your preferred sessions to your assigned sessions. You will be notified of assignments by e-mail.
- 7. For additional work over and above 2-3 complete sessions or 10 hours of total labor, student AV projectionists will receive compensation of \$7.50 per hour of work.

Note: You will be contacted by e-mail before the conference to request your preferred session assignments and to pre-schedule your hours.

Name (Last, First, Midd					
Institution					
Address					
City					
Daytime Phone		_ Fax		E-mail	
Society Membership(s)	(Check):	□ABLS	□AFS	☐ ASPT	□ BSA
I am presenting	a paper or poster	<u>.</u> 			
List day and time	e for presentation	ns:			
Check Days which you	are willing to wo	ork: [	☐ Mon, 8/15	☐ Tues, 8/16	6 □ Wed, 8/17
Experience working wit	h (Check):	Overhead Proj	ectors 3	5 mm Projector	s   LCD Projectors
Interested in working m	ore than 10 hour	rs? (Check):	☐ Yes [	□ No	

#### Send completed form to:

Johanne Stogran
Botany 2005 Meeting Manager
2813 Blossom Avenue
Columbus, Ohio 43231
Phys 614 800 0356

Ph: 614-899-9356 Fax: 614-895-7866

E-mail: johanne@botany.org

1 wish to apply for work at the Botany 2000 as				
a Student Audio/Visual Projectionist. I agree				
to abide by all rules listed above on this form,				
which are a part of this application.				
Signature				
Date				

Lwish to apply for work at the Botany 2005 as

# BOTANY 2005

# REGISTRATION FORM

# Botany 2005: Learning from Plants

Austin, Texas August 13 - 17, 2005

#### 3 Convenient Ways to Register:

- On-line: www.2005.botanyconference.org
- Fax: all completed forms to 614-895-7866
- Mail: all completed forms to:

Botany 2005 Registration - 2813 Blossom Ave - Columbus, OH 43231

Please Print or Type Legibly (one form per registrant)

If you are Faxing this form or using On-line Registration, please do not mail the original.

Title\_\_\_\_First Name\_\_\_\_Middle Initial \_\_\_\_Last Name\_\_\_\_\_\_
Institution:\_\_\_\_\_Department:\_
Address Line 1:\_\_\_\_\_
Address Line 2:\_\_\_\_\_\_\_
City, State & Zip:\_\_\_\_\_\_\_
Country:\_\_\_\_\_\_Telephone:\_\_\_\_\_\_
Fax:\_\_\_\_\_Email:\_
Badge Information - Name\_\_\_\_\_\_
University/Organization\_\_\_\_\_\_
Society Membership: Check all that apply \_\_\_\_\_ ABLS \_\_\_\_ AFS \_\_\_\_\_ ASPT \_\_\_\_ BSA

#### REGISTRATON FEES

Registration fees for the Full Conference covers all events. Educational Forum Only fees cover Friday night Reception, Saturday Sessions, Keynote Address, Saturday Reception and Sunday Workshops. Scientific Meeting fees cover four days of the meeting, Sunday - Wednesday, including Workshops, the Plenary Lecture, All-Society Mixer, all Scientific Sessions, Poster Displays, and the Exhibit Hall. Field trips and Local Tours are extra. Please check the appropriate rate:

	Early	Late	On-Site
	(Now - July 10th)	(July 11 -August 12)	(August 12 - On )
Full Conference			
Professional-Member		□ \$315.00	□ \$340.00
Professional-Non-Member		□ \$400.00	□ \$450.00
Student*		□ \$140.00	□ \$160.00
K-12 Educator*		□ \$140.00	□ \$160.00
Educational Forum Only			
Professional-Member		□ \$90.00	□ \$100.00
Professional-Non-Member		□ \$90.00	□ \$100.00
Student*		□ \$65.00	□ \$75.00
K-12 Educator*		□ \$65.00	\$75.00
Scientific Meeting Only			
Professional-Member		□ \$300.00	□ \$325.00
Professional-Non-Member		□ \$380.00	□ \$400.00
Student*		□ \$140.00	□ \$160.00
K-12 Educator*		□ \$140.00	□ \$160.00
One-day - (Scientific Meeting Only)		□ \$125.00	□ \$125.00
Check Day	🗆 Monday	☐ Tuesday	☐ Wednesday
Workshops and/or Field Trips Only		□ \$20.00	□ \$20.00
Companion**	\$60.00	□ \$60.00	□ \$60.00

<sup>\*</sup>Student/Educator Verification: Academic Affiliation Name and E-Mail of Professor or Supervisor

NOTE: Does NOT include admission to scientific sessions.

<sup>\*\*</sup> Includes admittance to Plenary Lecture, All-Society Mixer, Poster displays, and the Exhibition Hall. Includes eligibility for workshops, field trips, local tours and social events.

$\mathbf{D}_{\mathrm{E}}$	MOG	RAPH	ICS			
	ır Curre					
	$\Box$ U	ntenureo	d faculty□ Tenured faculty	☐ Administrator	☐ Scientist at a Government	Lab or Agency
		ostdoc		nt 🗆 Undergraduate Student	☐ K-12 Educator (Grade leve	
• Plo	ease ind	icate if	you are an author of	• Plea	ase indicate if you are a prese	enting
	conferer				nor for a presentation. (Chec	
☐ Yes, I am an abstract author				☐ Contributed Paper	☐ Contributed Poster	
	□No	, I am n	ot an abstract author		☐ Symposium presentation☐ Forum Session	☐ Special Lecture ☐ Discussion Session
• He	ow did y	ou learı	n about the Conference:		☐ I am not a presenting auth	or
	□Di	rect soci	ety mailing	ociety newsletter		
		non-soci	ety Listserve or web site (e	.g., PlantEd, NABT web site,	etc.) $\square$ Conference web	site
	$\Box$ A $\mathfrak{g}$	orint adv	ertisement in a journal (e.g	, BioScience, American Biolog		
	□Di	rect mail	ling to my K-12 school		□ Other (	
FR	EE.	Wor	KSHOPS			
	plete inf 2nd			hops will be held at the H	ilton. Check your tickets for	exact rooms, time and
Ful	ll Day					
		W-1	8:00 am - 5:00 pm	Writing floristic treatme. America experience	nts: a workshop for authors,	based on the Flora North
<b>A11</b>	Morn	ing - 4	4 Hour	rimerica experience		
		W-2	8:00 am - 12:00 pm	Activities & Ambassador through Field Trips	rs: Using Living Collections	to Teach Schoolchildren
		W-3	8:00 am - 12:00 pm	Keep Your Biology Class	s Alive with Fast Plants	
Ea	rly Mo	rning	- 2 Hour			
		W-4	8:00 am - 10:00 am	Technical Writing I		
		W-5	8:00 am - 10:00 am	_	ry including an introduction	to BSA Sci-π
Lat	te Mor	ning .	- 2 Hour			
		_	10:15 am - 12:15 pm	BSA Sci-π: Seeds of Cha	nge in the Classroom	
Lat	te Mor	ning .	- 1 Hour			
		W-7	11:00 am - 12:00 pm	Writing for ESL Authors	3	
<b>A</b> 11	After	noon -	4 Hour			
		W-8	1:00 pm - 5:00 pm		ntive Group Learning Environations: Lessons from the Tren	
		W-9	1:00 pm - 5:00 pm	The Tree of Life		
		W-10	1:00 pm - 5:00 pm	C-Ferns in the Classroor	n	
Ea	rly Aft	ernoo	n - 2 Hour			
		W-11	1:00 pm - 3:00 pm	Technical Writing II		

#### FIELD TRIPS

Field trip and Tour fees include transportation and lunch where indicated. Spaces are limited. Please indicate your 1st and 2nd choices as desired for each time slot. Pay only for your 1st choice. All trips will depart from and return to the Snowbird. See Field Trip and Tour descriptions for full discussion of trip destinations, leaders, logistics, special notes and expected costs. Please read the "Refund and Cancellation Policy."

	cate choice: 2nd	: Pay only for your firs	st choice	
Sati	u <b>rday, A</b> u □ FT 1	agust 13 8:00 am – 4:00 pm	B&B - Botany and Barbeque – Palmetto State Park .\$40.00 x $\#$ of Tickets	=
Sun	day, Aug	•	Useful Wild Plants of McKinney Falls State Park\$40.00 x # of Tickets	=
	□ FT 3	8:00 am – 4:00 pm	B & V - Botany and Vino – Pedernales Falls State Park and Becker Vineyards\$64.00 x # of Tickets	=
	□ FT 4	9:00 am – 4:00 pm	Central Texas Spring-Fed Rivers: From Lindheimer's Paradise to Endangered Species\$75.00 x # of Tickets	=
	□ FT 5	8:00 am – 4:00 pm	Blanco River Botany: Central Texas limestone endemics\$120.00 x # of Tickets_	=
	□ FT 6	8:00 am – 4:00 pm	Balcones Canyonlands Limestone Grotto and Canyon Flora: Hamilton Pool and West Cave\$72.00 x # of Tickets	=
	□ FT 7	8:00 am – 5:00 pm	Early Tertiary Floras of Central Texas\$80.00 x # of Tickets	=
	□ FT 8	7:00 am – 5:00 pm	Ferns of the Central Texas Area\$85.00 x # of Tickets	=
	□ FT 9	7:30 am – 5:00 pm	Bryophytes and Lichens of the Texas Hill Country\$75.00 x # of Tickets	=
	□ FT 10	6:30 am – 8:00 pm	Jewel of the Post Oak Belt: Bogs and Xeric Sands of the Gus Engeling WMA\$120.00 x # of Tickets	=
	rning Tri nday, Au			
			Wild Basin Wilderness Preserve\$30.00 x # of Tickets	=
Tue	esday, Au FT 12	_	Lady Bird Johnson Wildflower Center: Plant Conservation, Landscape Restoration, and Information Networking\$30.00 x # of Tickets	=
Wed		<b>August 17</b> 8:00 am – 12:00 pm	A Brief Introduction to the Balcones Escarpment Flora: Balcones Canyonland Preserve\$45.00 x # of Tickets	=
<b>Th</b> ı 3 day	ursday - S rs - 2 nights I	ence Trips Saturday, August Leave 7:00 am Thursday	- return early evening Saturday	
	□ FT 14		Big Bend National Park\$300.00 x # of Tickets_	
	☐ FT 15		Texas Subtropics: "The Valley"\$300.00x # of Tickets	=

Total Field Trips\_

# TICKETED EVENTS

TICKETED LVENT	3	
Monday, August 15		
TE 1 7:00 am - 8:30 ar	m ABLS Breakfast	\$15.00 x # of Tickets=
TE 2 12:00 pm - 1:30 <sub>1</sub>		\$25.00 x # of Tickets=
TE 3 6:00 pm - 8:00 pm	m Texas-Exes Tex Mex Recept	ion\$20.00 x # of Tickets=
TE 4 6:30 pm - 10:00 j	pm Paleobotanical Banquet and	Auction\$35.00x # of Tickets=
Tuesday, August 16		
TE 5 7:00 am - 8:30 ar	m Missouri Botanical Garden	Breakfast\$15.00 x # of Tickets=
TE 6 11:30 am - 1:00 p	m Economic Botany Luncheon	n\$25.00 x # of Tickets=
TE 7 5:00 pm - 7:00 pm	m Ohio State University Recep	otion\$20.00 x # of Tickets=
TE 8 6:00 pm - 10:00 p	om ASPT Banquet and Auction	\$40.00 x # of Tickets=
Wednesday, August 17	7	
TE 9 7:00 am - 8:30 ar	m Miami University of Ohio B	reakfast\$15.00 x # of Tickets=
TE 10 7:00 pm - 9:30 pm	m BSA Banquet	\$40.00 x # of Tickets=
	Total Ticketed Events	3
Local Tours		
Monday August 15th		
LT 1 9:30 am-3:00 pm	1 ,	\$35.00 x # of Tickets=
Tuesday August 16th LT 2 9:30 am-3:00 pm		\$40.00 x # of Tickets=
Wednesday, August 17 LT 3 10:00 am – 4:00p		\$35.00 x # of Tickets=
_		Total Local Tour Events
Conference T-S	HIRT	
I would like to order the Of Specify size(s): S	ficial Conference T-Shirt, with the Bot 5 M L XL	How Many Shirts x \$12.00 = \$
Pick up your shirts at Regist	ration.	Sizes:
SPECIAL NEEDS		
Please indicate any spec		
Physical Access		
•		
Dietary		

STUDENT PROJECTIONIST	
☐ I wish to work as a Student Projectionist and have my Scientific Me Please be sure to read the the registration brochure for details and fill out must register for the meetingfee waivers are not given. Be sure and so	the "Application to serve as a Student Projectionist." You
Conference Housing	
Blocks of Rooms have been reserved at the two hotels listed below, as Campus. Please plan to stay within the hotels with which we are contrac Make your hotel reservations directly with the hotels using the inform get the conference rate. Make Dobie Center reservations directly with registration.	ted as this helps to keep the meeting costs down. nation provided and be sure to mention Botany 2005 to
☐ Yes, Housing is required and I have a reservation at:	(Check One)
The Austin Hilton 500 East 4th Street Austin, Texas 78701 Phone: (512) 482-8000 www.hilton.com	Direct links for hotel reservations can be found on the conference website: www.2005.botanyconference.org
The Hampton Inn and Suites 200 San Jacinto Austin, Texas 78701 Phone: (512)472-1500 www.hamptoninn.com	
☐ I would like to reserve a room at the Dobie Center Do	rms
I will arriveand Depart	Number of Nights
Single—\$45.00 per person (tax included) Double—\$36.80 per person(tax included) Roommate Name	Rate X  Dorm Lodging Fee =
□ No, I do not need Housing.	
☐ I am sharing a room but not making the reservation	
The room holder is	

#### REFUND AND CANCELLATION POLICY

Requests for registration fee refunds will be honored if received in writing before July 9, 2005.

Botany 2005 Registration 2813 Blossom Ave Columbus, OH 43231

Registration fee refunds will be subject to a \$50 processing fee. Fieldtrips and Local Tour, and Social Events, fees are non-refundable if cancelled after July 10th. Full fee refunds will be granted for Social Events, Scientific Field Trips, Local Tours, and Workshops if they exceed maximum enrollment, do not meet minimum enrollment, or if cancelled for any reason. All Refunds will be processed after the meeting

Conferenci	E FEES TOTALS		
	Registration Fee	\$	
	Workshops	\$	
	Scientific Field Trips	\$ \$ \$ \$ \$	
	<b>Ticketed Society Events</b>		
	T-Shirts		
	Local Tours		
	Dorm Fees		
Payment Inf		STRATION FEES	
Check enclosed	FORMATION  payable to: Botany 2005 (in US Dollars		Discover
Check enclosed Payment by Cre	FORMATION  payable to: Botany 2005 (in US Dollars	only) asterCard American Express	
Payment by Cro	PORMATION  payable to: Botany 2005 (in US Dollars edit Card: (circle one) Visa Ma	only) asterCard American Express	

# Learning from Plants-August 13-17, 2005 www.2005.botanyconference.org Conference Overview Botany 2005

Thursday August 18	Post- Conference	2 Options		
Wednesday August 17	d Symposia s and schedule Miami Univ of	Field Trips 1 Option	Companion Tours 1 Option	BSA Banquet
Tuesday August 16	Concurrent Paper Sessions and Symposia Check website for list of sessions and schedule  Seakfast  MO Botanical  Miami Univ	Field Trips 1 Option	Companion Tours 1 Option Economic Botany Lunch Conference-wide Poster Session	Ohio State University Reception ASPT Banquet
Monday August 15	Concurrent Check website ABLS Breakfast	Field Trips 1 Option Companion Tours	1 Option Plenary Symposium AFS Luncheon Annals of Botany Special Lecture	Paleobotanical Banquet and Auction
Sunday August 14	Field Trips 7 Options	FREE Workshops 11 Options	Society Meetings Boards, Councils & Committees	Plenary Lecture All-Society Mixer
Saturday August 13	Forum on Botanical Education & Outreach	Keynote Lecture Barbara Schulz	Concurrent Sessions Check website for list of sessions & schedule	Forum Reception
Friday August 12				Forum Registration Light Reception
		Daytime		Evening



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