



Field trip fees include transportation and lunch where indicated. All field trips depart from the Albuquerque Convention Center. Please read the 'Refund and Cancellation Policy.' Scientific Field Trips are ticketed events; tickets may be purchased while registering. Field trip tickets will be included in the registration packet, which will be distributed on-site in the Registration Area. 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.

SATURDAY AUGUST 11

***FT 1 Lichens & Bryophytes of the  
\$150 Sangre de Cristo Mountains***

**Departs Fri at 8 am and returns Sat at 6 pm - Lunch included on Friday. Lodging and additional meals on your own**

**Trip Leader--Thomas Nash & David Johnson  
Contact: Thomas Nash**

*Dept of Botany Arizona State University  
Tempe, AZ  
(602) 965-7735 tom.nash@asu.edu*

Some of the earliest cryptogams from New Mexico were collected by Bro. Arsene in the Sangre de Cristo Mts, including alpine areas. We will visit these historical sites as well as adjacent areas. Hiking boots recommended; afternoon showers likely.

***FT 2 Paleocology of the Cretaceous-Tertiary  
\$150 Boundary in the Raton Basin,  
New Mexico & Colorado***

**Departs Sat at 8 am and returns Sun at 5 pm Lunch included on Saturday. Lodging and additional meals on your own**

**Trip Leader--Gary Upchurch Dept of Biology  
240 Science Southwest Texas State University  
San Marcos, TX 78666  
(512) 245-3751 or gu01@swt.edu**

The Raton Basin provides important evidence for catastrophic extinction of the land flora and marked changes in climate and vegetation across the Cretaceous-Tertiary (or K-T) boundary. We will collect leaf megafloras that illustrate this vegetational and climatic change, beginning with subhumid, broad-leaved evergreen assemblages of latest Cretaceous age and ending with wet, broad-leaved evergreen assemblages of early Paleocene age. We will see: 1) a typical small-leaved latest Cretaceous flora, 2) the K-T boundary clay (fallout from the impact of a large asteroid on Earth), 3) the interval of fern dominance that immediately follows extinction of Cretaceous palynomorphs at the K-T boundary clay, 4) large-leaved earliest Paleocene egathermal rainforest assemblages that overlie the fern-abundance horizon and represent the early phases of dicot recolonization, and 5) younger large-leaved Paleocene assemblages that post-date the K-T boundary event by roughly 1 million years (if time permits).

***FT3 El Malpais National Monument***

**\$ 55** Departs by bus at 7:30am. Returns at 5:30 pm  
**Includes Box Lunch**

**Trip Leader--David Bleakly**

**3813 Monroe NE Albuquerque, NM 87110**

**Phone: 505 888-4608 or bleakly@flash.net**

In New Mexico, "El Malpais" means volcanic badlands and this Spanish term was used to describe the area southwest of Grants before part of it became a National Monument in 1988. It is composed almost entirely of basaltic lava and volcanic features, such as cinder cones, lava tubes, and kipukas. The several flows were emplaced from about 3000 to over 500,000 years ago. The vegetation on the lava is more mesic than the surrounding grasslands and includes Douglas fir, ponderosa pine, alligator juniper, and quaking aspen which grow at elevations lower than typical. A rare plant, *Phacelia serrata*, is found in New Mexico only in cinders in the northwest corner of the monument area. Some lava tubes contain permanent ice and support unique plant communities near their mouths. The tour will begin at Sandstone Bluffs Overlook, one of the few nonvolcanic substrate locations in the monument. We will continue to the west side of the lava flows and stop at Junction Cave, a lava tube, and take a short hike. The next stop is at the Park Service ranger station. At Zuni ice cave, we will take another hike of about a mile to visit Bandera Crater, a classic cinder cone, and the ice cave itself.

Although the terrain is very rough we will be mostly on good trails of no more than moderate difficulty. Nevertheless, wear boots or stout shoes and bring a quart of water, a hat, and sun protection (sunscreen, long-sleeved shirt). Dress should be suitable for outdoor activities and short hikes in weather that can range from hot to stormy. Pit toilets or bathrooms are available at each stop.

***FT4 Bosque del Apache  
\$50 National Wildlife Refuge***

**Departs by bus at 8am Returns at 5 pm Includes Box Lunch**

**Trip Leaders--Kirk Mc Daniel & John Taylor**

**Contact: Kirk Mc Daniel Dept of Animal and Range Sci**

**MSC Box 3-1, New Mexico State University**

**(505) 646-1191 or kmcdanie@nmsu.edu**

The Bosque del Apache NWR was established in 1939 and is a refuge and breeding grounds for migratory birds and other wildlife. Waterfowl are most abundant in winter, whereas summer, though quiet, remains an oasis in the surrounding arid lands. This tour will view flora typical of the Chihuahuan desert on mesas that border and grade downward to the Rio Grande floor. Discussions will include the approach the refuge is following to restore riparian "bosque" woodlands in areas along the river that are dominated by saltcedar.



**FT 5 Botany and Stream Restoration**

**\$60** at the Monticello Box

Departs at 8 am and returns at 6 pm Includes Box Lunch

**Trip Leaders--Mike Matush, Dennis O'Toole & David Cross**

**Contact: Mike Matush New Mexico State Land Office**

**310 Santa Fe Trail, Santa Fe NM 87504**

**(505) 827-5096 or mmatush@slo.state.nm.us**

Ojo Caliente, the largest warm springs in New Mexico, is the source of Alamosa Creek, which flows through Monticello Box to the Rio Grande. The field trip will examine the botany and restoration of the springs region.

Extra water, sun protection, and extra shoes (you will get your feet wet). No bathrooms.



**FT 6 Plants and People at the Pueblo of Zuni**  
**Traditional Ethnobotany and Recent Invasions**

**\$70** Departs at 7:15 am and returns 6 pm includes a box lunch

**Trip Leaders--Carol Brandt, Roman Pawluk, Pablov Padilla, Wilber Haskie**

**Contact: Carol Brandt Dept of Biology Univ of New Mexico**

**Albuquerque, NM 87131**

**(505) 277-4392 or cbrandt@unm.edu**

Participants will have an opportunity to learn about the flora and human ecology of the Zuni Pueblo, in west central New Mexico. We will walk among archaeological and historical ruins in the pinyon-juniper woodland, below red mesa walls on Zuni Tribal Lands. We will explore the historic farming villages that cluster at springs in this high desert, looking at plants that have ethnobotanical importance. Our trip will also focus on the recent problems that invasive plants have created at these locations. We would like participants of the field trip to engage in a dialogue about plants and how the Tribe might contend with this problem. The co-leaders include a paleoethnobotanist who will talk about prehistoric plant use, an agronomist who will talk about Zuni traditional and contemporary agriculture, a range manager who will speak about recent invasive plant species, and an ecologist who will talk about the ecology of the Zuni river valley.

Participants should have a hat, carry extra water, wear sturdy boots or shoes, and have sunscreen along. Walking will consist of short one to two mile excursions from our van stops and will be moderately strenuous. Bring your binoculars for bird watching opportunities. Raingear might be helpful since August is "monsoon" season; we can also expect an afternoon thundershower.

**FT 7 Ferns of Central New Mexico**

**\$60** Departs at 8 am Returns at 6 pm  
Includes Box Lunch

**Trip Leaders--Michael Windham & George Yatskievych**

**Contact: Michael Windham**

**(801) 581-6520 or windham@umnh.utah.edu**

We will travel south along the Rio Grande valley approximately 150 miles to visit several localities in the Manzano and Magdalena Mountains. In addition to a few cosmopolitan ferns, participants can expect to see a variety of xeric-adapted genera (*Selaginella*, *Cheilanthes*, *Pellaea*, *Argyroschisma*, and *Astroblepis*) plus several regional endemics in the genus *Woodsia*.

This trip will require moderately strenuous walking in dry, rocky habitats, some potential bush-whacking and a circumspect approach to the local fauna. Be prepared for weather extremes ranging from hot, dry conditions to monsoonal showers.

**FT 8 Helechos de La Frontera**

**\$30** (Ferns at the City's Edge)

Departs by bus at 8 am Returns at 1 pm Includes Box Lunch

**Trip Leaders--Michael Windham & George Yatskievych**

**Contact: Michael Windham**

**(801) 581-6520 or windham@umnh.utah.edu**

We tentatively plan to visit Embudito Canyon, situated in the Sandia Mountains just east of Albuquerque. This trip, providing an eclectic sampling of the ferns seen on Saturday, is offered for those unable to participate in the longer trip (#7) or for those who just can't get enough of the "Land of Enchantment."

This trip will require moderately strenuous walking in dry, rocky habitats, some potential bush-whacking and a circumspect approach to the local fauna. Be prepared for weather extremes ranging from hot, dry conditions to monsoonal showers.

SUNDAY AUGUST 12

**FT 9 Rio Grande Restoration on the**  
**Pueblo of Santa Ana**

**\$30** Departs by bus at 9am and return at noon

**Trip Leader--Todd Caplan Santa Ana Pueblo,**

**Dept of Natural Resources**

**51 Jemez Dam Rd. Ste 107**

**Bernalillo, NM 87004**

**Contact (505) 867-0615 or tcaplan@santaana.org**

The tour will focus on a 315-acre portion of the Rio Grande floodplain restoration project. This project was initiated in 1998 with the goals of removing approximately 115-acres of saltcedar and 200-acres of Russian olive from the floodplain and restoring native vegetation to the site. Native grasses have been seeded to the saltcedar area, and 1500 cottonwood and black willow poles have been planted in portions of the Russian olive area. If there is time, the tour will also visit a portion of the river restoration area, where the Pueblo has used bioengineering techniques to stabilize approximately 3600 feet of bankline along the Rio Grande.

Bring a hat, water and sunscreen.



## **FT 10 Lichens & Bryophytes** **\$50 of the Sandia Mountains**

Departs by van at 7:30 am and returns by 4 pm

**Trip Leader--Robert Egan & David Lightfoot**

**Contact: Robert Egan**

**Dept of Biology Univ of Nebraska at Omaha**

**Box Lunch Omaha, NE 68182**

**(402) 554-2491 or robert\_egan@unomaha.edu**

This one day field trip will take us to the high elevations of the Sandia Mountains, not far from Albuquerque.

Hiking boots recommended; afternoon showers likely

## **FT 11 Pennsylvanian Floras of the** **\$45 Albuquerque Area**

Departs at 8 am and returns at 5 pm  
Lunch is on your own

**Trip Leaders--Sidney Ash & Gene Mapes**

**1708 Quail Run Court, NE Albuquerque, NM 87122**

**(505) 856-5852 or sidash@aol.com**

The field trip will start with a short visit to the Crest of 3260 m high Sandia (Watermelon) Mountains on the east side of the Rio Grande Rift. There the participants can view modern subalpine meadows and forests and scenic vistas that extend 100s of km in virtually all directions. After a discussion of the modern flora and the geology of this fault-block mountain the party will proceed to the Kinney Quarry in the adjacent Manzano (Apple) Mountains which has yielded an interesting Late Pennsylvanian biota that includes the unusual non-peat forming flora described by Mamay and others. In route to the quarry stops will be made at other Pennsylvanian plant localities and at a restaurant where participants can purchase lunch. Collecting will be permitted at the Kinney Quarry. Shipping materials will be supplied but participants must bring their own collecting tools.

## **FT 12 Vascular Flora of the Sandia Mountains**

**\$ 50**

Departs at 9 am and returns at 5 pm  
and includes a box lunch

**Trip Leaders--Bob Sivinski & Ron Hartman**

**Contact: Bob Sivinski New Mexico Forestry Division**

**PO Box 1948 Santa Fe, NM 87504**

**(505) 827-7865 or bsivinski@state.nm.us**

The Sandia Mountains are a block-fault range that towers above the Albuquerque metropolitan area. 'Sandia' is Spanish for 'watermelon'. The origin of this name becomes apparent when the setting sun illuminates the arid Precambrian granite of Sandia escarpment in a glowing pink twilight. The gentle limestone backslope is wetter and blanketed in coniferous forest. This floristically diverse mountain rises from an arid grassland foothlope at an elevation of 1,800 m and crests in subalpine forest and meadows at 3,260 m. Our field trip will drive you to the Sandia Crest, stopping at mid-elevation conifer forests en-route. Once on the crest, we will walk 1 km to Kiwanis Point to admire the spectacular views and the Rocky Mountain subalpine flora.

Decent from the mountain will follow and stop in the deciduous riparian woodland of Las Huertas Canyon and finally end with a look at the gypsophilic plants of the Todilto Formation gypsum. Absolutely the greatest variety of New Mexican flora you can see in a single day field trip. Footwear appropriate for rocky trails. Hikes will be easy, but the summit is 3260 m, which can exacerbate pre-existing respiratory problems.

Bring extra water and be prepared for afternoon rain showers.

## **FT 13 Rio Grande Botanic Garden**

**\$30**

Departs by bus at 1 pm and returns at 5 pm

**Trip Leaders--Dave Ferguson & Jon Stewart**

**Contact: Dave Ferguson Rio Grande Botanic Garden**

**2601 Central Avenue Albuquerque, NM 87104**

**(505) 848-7149 or dferguson@cabq.gov**

The Botanic Garden opened to the public in December 1996 so we are still a young facility. It is one of three facilities in the City of Albuquerque's BioPark division. The other two are the Rio Grande Zoo and the Albuquerque Aquarium. Currently there are around 10 acres developed with an additional 60 available for future expansion. The Garden has formal gardens, including a rose garden, and native gardens displaying native New Mexico plants. We also have two conservatories. The Desert Conservatory displays plants from the southwest deserts that cannot be displayed outside. The Mediterranean conservatory displays plants that come from areas with cool wet winters and hot dry summers.

Dress for warm weather: hat, sunscreen. Restrooms are available. Visitors should carry water since there are no fountains in the garden.



## **FT 14 Cerro Grande Fire and the** **\$50 Los Alamos National Laboratory**

Departs by bus at 8 am and returns by 6 pm and includes lunch

**Trip Leader--Randy G. Balice**

**Ecology Group Mail Stop M887**

**Los Alamos National Laboratory Los Alamos NM 87545**

**(505) 665-1270 or ralice@lanl.gov**

An introduction to the fire ecology of the Pajarito Plateau and the effects of the Cerro Grande Fire on the regional ecosystems, the Los Alamos National Lab, and the Los Alamos townsite. We will examine the ecological and historical diversity of the Plateau and its surroundings, and their relationships to fire. A wide diversity of environments include five vegetational zones and 23 endangered species or species of concern.

Dress should be suitable for outdoor activities and short hikes in weather that can range from hot to stormy.



**Ft 15 Flora of the Southern Chuska Mountains**

**\$65** Departs by van at 7 am and returns by 7 pm Includes a Box Lunch

**Trip Leaders--Ken Heil, Daniella Roth & Steve O'Kane**

**Contact: Ken Heil San Juan College**

**4601 College Blvd. Farmington, NM 87402**

**(505) 599-0358 or (505) 599-0244 or heil@sjc.cc.nm.us**

**Daniella Roth Navajo Natural Heritage Program**

**(520) 523-7242 droth@juno.com**

The Chuska Mountains and Defiance Plateau are located within the Navajo Nation and straddle the Arizona/New Mexico state line for nearly 80 miles. A 600,000 acre upland ecosystem of ponderosa pine and mixed conifer forest covers the crest of the mountains, known collectively as the Navajo Forest. The watersheds of the range are a primary Navajo domestic water source and contain the highest levels of wildlife diversity on the Navajo Nation.

Seven plant and animal species occurring on the Navajo Forest are listed as threatened and endangered or as candidate species by the federal government. Additionally, nineteen threatened and endangered species found on the forest are listed or are candidates for the Navajo Nation Endangered Species Act. En route to the Chuskas, we will make stops at Thoreau and Nakaibito (Mexican Springs), then on through the Chuskas ending at Whiskey Lake (8900 ft).

Mostly easy hiking. There may be afternoon thunder storms. NO collecting is allowed unless they have a Navajo Nation Permit. Daniella Roth can help in obtaining these, if desired; contact her early!



**Ft 16 Petroglyph National Monument**

**\$ 30** Departs by bus at 8 am and returns by noon

**Trip Leader--Mike Medrano**

**Petroglyph National Monument**

**6001 Unser Blvd NW Albuquerque NM 87120**

**(505) 899-0250 X 334 9 or MM\_Medrano@juno.com**

Petroglyph National Monument was created in June 1990 to preserve an estimated 25,000 - 30,000 petroglyphs made by ancestral puebloans. The 7,200 acre park is located around a basalt volcanic field and the volcano where the volcanic field originated. The Monument is an important site to many native groups due in particular to the unique natural resources found in the Monument. Come experience the natural and cultural resources of Albuquerque's West Mesa.

Bring sun protection, be prepared for heat and don't rule out sporadic thunderstorms.

**FT 17 Natural History of Bandelier National Monument and the Jemez Mountains**

**\$ 50** Departs by bus at 8 am and returns at 6 pm and Includes lunch

**Trip Leaders--Bill Dunmire & Gail Tierney**

**Contact: Bill Dunmire**

**12 Camino a las Estrellas Placitas, NM 87043**

**(505) 864-3474 bdunmire@unm.edu**

This all day tour begins with a bus ride up the Rio Grande Valley to Bandelier National Monument, spectacular home to the prehistoric "Anasazi" Pueblo Indians. Here we hike to the famous cliff ruins in beautiful Frijoles Canyon, along the trail identifying the many species of plants that were used by these ancient peoples. After a picnic lunch and tour of the park museum, we continue on one of New Mexico's most scenic loop roads up into the forested Jemez Mountains, stopping to observe the dramatic revegetation from the Cerro Grande (Los Alamos) wildfire of last year, the Valle Grande, a million-year-old volcanic caldera (now a national preserve) and other botanical/geological points of interest.

Wear sturdy walking shoes, and a hat, don't forget sun-block, and a water bottle.



**FT 18 The Gila National Forest:**

**\$ 150 An Island in the Rough**

Departs Thursday at 7 am and returns Friday at 8 pm Lunch included on Friday. Lodging and additional meals on your own

**Trip Leaders--Jack Carter & Paul Boucher**

**Contact: Jack Carter PO Box 1244**

**Silver City, NM 88601**

The Gila National Forest includes 3.3 million acres of publicly owned forest and grassland rising above the deserts of the Southwest. Within the Gila National Forest lies the Gila and the Aldo Leopold Wilderness areas. From 50 miles north of the Mexican border, the Forest forms an irregular outline of 65 by 100 miles in area. The flora and fauna reflect the influence of the Southern Rocky Mountains, the Mogollon Mountains, Mexico's Sierra Madre Mountains, and the Chihuahuan Desert, with elevations ranging from 4500 ft in the desert regions to almost 11,000 ft on Whitewater Baldy. Although over 900 vascular plants have been collected and identified from the Gila National Forest, there are still relatively large areas that have never been critically studied.

Field clothing will be necessary, including field boots, sun protection, insect repellent and rain gear.



Local tour fees include transportation from and return to the Albuquerque Convention Center or hotel and lunch for LT 6. Ticket prices are different for adults and children. Please note that local tours require a minimum number of individuals. Please read "Refund and Cancellation Policy". Local Tours are ticketed events; tickets may be purchased while registering. Local tour tickets will be included in the registration packet, which will be distributed on-site in the Registration Area.

**LT 1 Hot Air Ballooning** each morning Sat through Thurs, 11-17 Aug; 6:15 am to 9:15 am  
Price includes transportation from hotel, 1 hour flight, certificate, and refreshments.  
\$149 per adult \$99 for children 12 and under. Not available for children under 42" tall

Albuquerque is the hot air ballooning capital of the world. Our flight takes us over the beautiful Rio Grande valley for breathtaking views of the city, the Sandia Mountains to the east and the volcanoes to the west. Light refreshments and a ceremony commemorating our adventure at the end of the flight. Be sure and indicate the day you wish to participate.

**LT 2 Jane Butel Southwestern Cooking School**  
Mon, Aug 13 10:00 am to 12:30 pm.  
Includes lunch of prepared food. \$59

Jane Butel began teaching Southwestern cooking over 30 years ago. You will watch as she prepares traditional New Mexican favorites such as enchiladas, sopapillas, guacamole, salsa and quesadillas. At the end of the demonstration you will enjoy tasting all that has been prepared for you!

**LT 3 Sandia Peak Tram**  
Mon, Aug 13 12:30 to 5:00pm. Includes tram ticket  
\$41 for adults \$20.50 for children under 12 (under 5 free)

Sandia Mountain dominates Albuquerque's east side with its 5,000 foot vertical rise. Our 15 minute tram ride takes us through the four biological life zones and reveals awe-inspiring views. Note: due to elevation, individuals with heart or respiratory conditions should ask the advice of their doctor.

**LT 4 Experience Santa Fe**  
Tue, Aug 13 9:00 am to 5:00 pm. Lunch on your own  
\$35 for adults \$17.50 for children under 12 (under 5 free)

No trip to New Mexico is complete without a stop in Santa Fe, the "City Different." The tour guide will lead a walking orientation tour of the Plaza and then you will have approximately 4 hours to experience Santa Fe with your own interests in mind. Shopping around the Plaza is always exciting. Some of Santa Fe's finest clothing and specialty stores are located in the old Victorian buildings looking out onto the Plaza. Local native artisans are found at the portal of the Palace of the Governors, selling exquisite Indian art and crafts including pottery and jewelry. There are commercial galleries in the area and when you are tired of shopping, fine cafes are found around and near the Plaza. There will also be a shuttle available to go to the Santa Fe's Children's Museum for those with Children.

**LT 5 Zia Pueblo Feast Day**  
Wed, Aug 15 9:00 to 4:00 pm . Lunch on your own at fiesta  
\$32 for adults \$16 for children under 12 (under 5 free)

This is a very unique experience! Zia Pueblo is located northwest of Albuquerque; its annual feast day is August 15. It is situated on a rocky knoll where it blends into the landscape like a natural feature of the terrain. For six hundred plus years it has weathered the worst that man and nature could inflict upon it - and it has survived. Although the pueblo itself is inconspicuous, its Sun Symbol is familiar to all New Mexicans, for it is the official state insignia appearing on the state flag. On the way to the Pueblo, the guide will explain Pueblo etiquette so you will be sure not to make a faux pas. We will watch dances in the Plaza that are virtually unchanged for nearly a millennium. There will also be a good number of "carnival" type foods and jewelry vendor booths. Photography, video or recording of any kind is not allowed. For more information regarding this unique adventure go to [www.indianpueblo.org/zia](http://www.indianpueblo.org/zia)

**LT 6 Acoma Indian Pueblo – Sky City**  
Thu, Aug 16 9:00 am to 5:00 pm.  
Includes lunch. Photography Limited  
\$55 for adults \$27.50 for children under 12 (under 5 free)

Acoma Pueblo is situated on top of a mesa, hundreds of feet above the surrounding land. It commands a breath-taking view of the countryside, other mesas and the distant mountains - no wonder it is called Sky City. Step back in time as we visit Petroglyph Park and walk the short trails among these ancient rock carvings (some thousands of years old). These petroglyphs are preserved in a volcanic escarpment on Albuquerque's west side. Afterwards, enjoy your box lunch as we travel to New Mexico's oldest, continually inhabited Indian village (over 1000 years old) which remains without electricity or running water. Wear comfortable walking shoes, the mesa top is uneven rock and sand. Bring a hat and sunglasses. Photography is limited. Camera permits are \$10, no video, no digital cameras. For more information about this fascinating place visit [www.indianpueblo.org/acoma](http://www.indianpueblo.org/acoma)



## SCIENTIFIC WORKSHOP



Workshop fees include transportation between the Albuquerque Convention Center (ACC) and the University of New Mexico. Please read 'Refund and Cancellation Policy.' Workshop is a ticketed event; tickets may be purchased while registering. Workshop tickets will be included in the registration packet, which will be distributed on-site in the Registration Area. If you participate in a workshop before you pick up your registration packet, please bring your 'registration confirmation notice' so that you have a record of your purchased ticket.

### TEACHING GENERAL PHYSICAL PRINCIPLES USING BOTANY: XYLEM AND FLUID DYNAMICS

Sunday August 12th 1-4pm

Presented by Stanley A. Rice,

Department of Biological Sciences,

Southeastern Oklahoma State University, Durant OK 74701-0609,

580-745-2688, FAX 580-745-7459, srice@sosu.edu

**\$25**

Description: The Hagen-Poiseuille principle (which relates water flux rate to the fourth power of the radius of a pipe) applies to the flow of water through xylem, and the flow of blood through arteries, as well as to the flux of fluid through pipes. It is thus useful for teaching about the connections between different scientific disciplines. In this workshop, participants will use staining and microscopy to measure the diameters of xylem elements in stems, and to compare the xylem measurements with the previously-measured transpiration rates of the plants. Using statistical analysis, participants will determine the mathematical model that best fits the results: the sum of xylem diameters, the sum of squares, the sum of cubes, or the sum of fourth powers (as the Hagen-Poiseuille principle demands).

Participants will also discuss other factors that influence transpiration rate and the limitations of applying the Hagen-Poiseuille principle to transpiration rate.

## TICKETED 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 at the registration area.

<b>ABLS Breakfast</b>	\$20	Mon, Aug 13	7:00 am - 8:30 am	Hyatt Regency Hotel
<b>Economic Botany Luncheon</b>	\$21	Mon, Aug 13	11:30 am – 1:00 pm	Hyatt Regency Hotel
<b>AFS Luncheon</b>	\$21	Mon, Aug 13	Noon – 1:30 pm	Hyatt Regency Hotel
<b>IOPB Reception/Mixer</b>	\$15	Mon, Aug 13	5:30 pm – 8:00 pm	Hyatt Regency Hotel
<b>Paleobotany Banquet</b>	\$35	Mon, Aug 13	6:30 pm – 10:00 pm	New Mexico Museum of Natural History
<b>Missouri Botanical Garden Breakfast</b>	\$20	Tues, Aug 14	7:00 am – 8:30 am	Hyatt Regency Hotel
<b>Miami University Breakfast</b>	\$20	Tues, Aug 14	7:00 am – 8:30 am	Hyatt Regency Hotel
<b>ASPT Banquet</b>	\$35	Tues, Aug 14	6:30 pm – 10:00 pm	New Mexico Museum of Natural History
<b>BSA Banquet</b>	\$35	Wed, Aug 15	6:30 pm – 10:00 pm	Hyatt Regency Hotel