

PROGRAM



Aquatic and Wetland Plants: Wet & Wild

THE ANNUAL MEETING OF FOUR
PROFESSIONAL SOCIETIES

BOTANICAL SOCIETY OF AMERICA
AMERICAN SOCIETY OF PLANT TAXONOMISTS
AMERICAN BRYOLOGICAL AND LICHENOLOGICAL SOCIETY
AMERICAN FERN SOCIETY

July 26-31, 2003
Arthur R. Outlaw Convention Center
Mobile, Alabama

Arthur R. Outlaw Convention Center Floor Plan

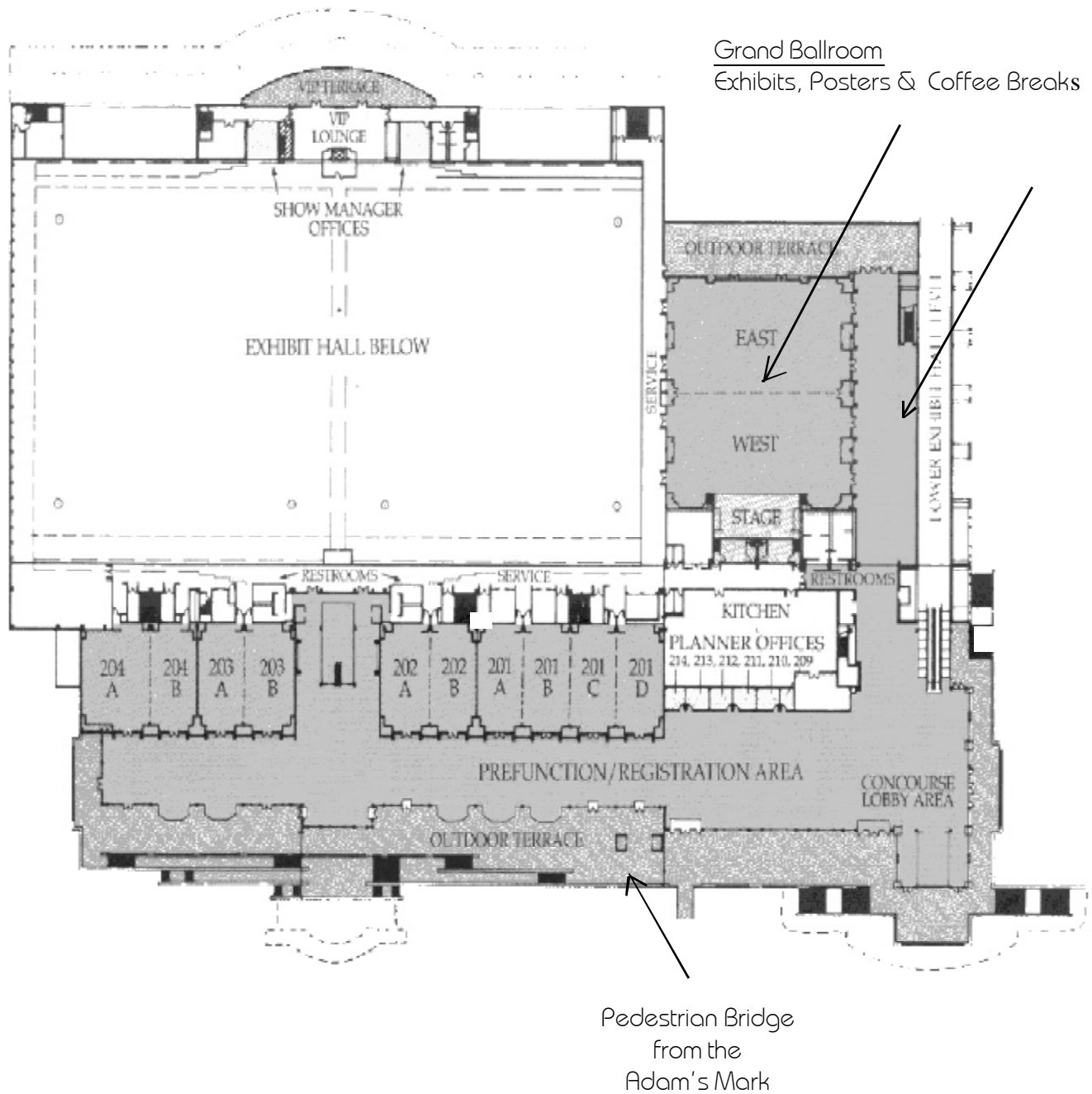
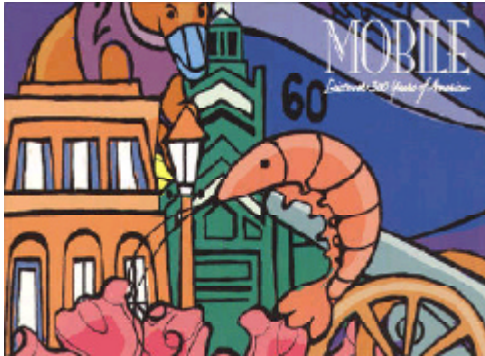


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Mobile is one of the most unique slices of the Deep South. This 300-year old seaport blends southern heritage and hospitality with the international influences left behind by French, Spanish, English, African, and Creole settlers.

The Port City of Mobile, has spent the last 300 years becoming a premier destination for visitors of all ages, cultures and backgrounds! The city, which celebrated its 300th birthday in 2002, is famous for its abundant culture, rich history and sumptuous cuisine. The Port City has become a tourist and convention favorite in the past years due to the construction of a waterfront convention center, new attractions and significant growth of its downtown retail industry and midtown residential areas.



Mobile is home to many attractions, museums, and other venues for visitors to enjoy. The Gulf Coast Exploreum Museum of Science and IMAX Theater offers three venues of fun for all ages. Just across the street, the Cotton Blossom Sternwheeler can take eager passengers on an excursion up the Mobile River. Visitors

can also explore Mobile's fascinating past with a visit to the Museum of Mobile. The museum is located in a historic building that was once an open-air market and city hall. Over 100,000 artifacts allow visitors to see and learn about the city's fascinating past and remarkable development into a commercial and maritime center. The museum also houses the royal robes of



Mardi Gras Queens dating back to 1928.

Boating on a much larger scale is only minutes away at one of Mobile's anchor attractions; the U.S.S. Alabama Battleship Memorial Park is your onramp to adventure.

Visitors can climb aboard the Battleship that won nine World War II Battle Stars, delve into the depths in the Submarine U.S.S. Drum and fly with 21 combat planes in the aircraft pavilion.



Mobile's other anchor attraction, Bellingrath Gardens & Home, is about 20 minutes southwest of the city. It encompasses 65 acres of beautifully landscaped gardens around the historic home of Walter and Bessie Bellingrath.



With the bounty of the sea at Mobile's door the Port City has a tempting palate to offer any discerning connoisseur. From the delicious Gulf shrimp barbecued, fried, boiled, or steamed; to oysters on the half-shell; to the flaky white fish of the Gulf of Mexico there is a lot to offer even the most discerning palate.



within walking distance of the Arthur R. Outlaw Center there are a variety of restaurants with delicacies from the sea to the countryside that can be found throughout the Port City.

Mobile cuisine, long known for the best of the sea extends to restaurants located throughout the Port City. Many of the legendary hangouts of Mobile are still operating today. Located

The neon lights of Dauphin Street, within walking distance of downtown hotels, mark the "Little Bourbon Street" of Mobile with restaurants and nightclubs offering something for everyone. The rest of downtown Mobile is a maze of interesting shops and palate-pleasing restaurants, with most storefronts restored to illustrate the city's historic architecture.



Participating Societies



BOTANICAL SOCIETY OF AMERICA
Scott Russell, President
University of Oklahoma

AMERICAN SOCIETY OF PLANT TAXONOMISTS
Lynn G. Clark, President
Iowa State University

AMERICAN FERN SOCIETY
Christopher Haufler, President
University of Kansas

AMERICAN BRYOLOGICAL AND LICHENOLOGICAL SOCIETY
William Buck, President
New York Botanical Garden

Conference Planning



Conference Wide & Botanical Society of America

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REGISTRATION AREA

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 will be located in the Adam's Mark Prefunction area on Friday evening and Saturday morning. Sunday morning through Wednesday it will be located in the Pre Conference area of the Convention Center.

Friday	July 25 ...	6:00 pm to 9:00 pm
Saturday	July 26 ...	8:00 am to 6:00 pm
Sunday	July 27 ...	8:00 am to 6:00 pm
Monday	July 28 ...	7:30 am to 5:00 pm
Tuesday	July 29 ...	7:30 am to 5:00 pm
Wednesday	July 30 ...	7:30 am to 12:00 pm

REFUND AND CANCELLATION POLICY

Requests for registration fee refunds will be honored if received in writing before June 24, 2003 to:

Botany 2003 Registration Center
PO Box 714079
Columbus, OH 43271-4079

Registration fee refunds will be subject to a \$50 processing fee. Field trips and Local Tour, Social Event and Workshop fees are non-refundable if cancelled after June 24, 2003.

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.

FEDERAL TAX ID NUMBER

The Federal Tax ID number for the Botanical Society of America is: 62-0671591.

SPECIAL SERVICES

If you require special accommodations, assistance or services during BOTANY 2003, please check the box provided on the registration form and a BOTANY 2003 representative will contact you.

CHILD CARE

Child care can be arranged by directly calling: My Favorite Nanny at 251-634-0145.

Attendees are completely responsible for making their own arrangements with the provider. BOTANY 2003 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.

CONFERENCE HOUSING

The Adam's Mark Hotel, 64 South Water Street, Mobile, AL 36602, is the conference host hotel. Additional housing options available at the Radisson Admiral Semmes Hotel, 281 Government Street, Mobile AL 36602. Dormitory accommodations are available at Spring Hill College, 4000 Dauphin Street, Mobile, AL 36608.

Conference attendees should make their own reservations directly with the facility of their choice. Mention BOTANY 2003 for the conference rate, if it is available.

TICKETED SOCIETY AND ASSOCIATION EVENTS

The society and group events listed below 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.

Monday, July 28

ABLS Breakfast

7:00 am - 8:30 am \$15.00

AFS Luncheon

12:00 pm - 1:30 pm \$20.00

Paleobotanical Section Banquet

7:00 pm-10:00 pm \$35.00

Tuesday, July 29

Missouri Botanical Garden Breakfast

7:00 am - 8:30 am \$15.00

Economic Botany Luncheon

11:30 am - 1:00 pm \$20.00

ASPT Banquet and Auction

6:00 pm - 10:00 pm \$35.00

Wednesday, July 30

Miami University of Ohio Breakfast

7:00 am-8:30 am \$15.00

BSA Banquet

7:00 pm - 10:00 pm \$35.00

COFFEE BREAKS

Complimentary coffee breaks will be held in the Exhibit Hall on Monday, Tuesday, and Wednesday mornings and afternoons.

MESSAGE AND ANNOUNCEMENT BOARDS

Messages for conference attendees will be able to be posted on message boards, which will be located near the Registration area. A "Positions Available" board will also be available for postings.

PRESS ROOM

A press room will be available in the Convention Center during the Conference in Room 211.

BOTANY 2003 LOGO

The Botany 2003 logo was created by Deane Arnold, Graphic Designer and Illustrator.

E-mail: deane.arnold@att.net

INTERNET CAFE

Internet accessibility will be available in the Internet Cafe located outside the Exhibit Hall, in the Convention Center. Sponsored in part by the University of South Alabama, the Cafe will be in operation Monday through Wednesday from 9:00 am to 5:00 pm.

Internet Cafe Sponsored in part by:



University of South Alabama

Monday - Wednesday 9:00 am - 5:00pm

Outside the Exhibit Hall

LOCATION OF SCIENTIFIC SESSIONS AND EXHIBITS

All exhibits and sessions will be held in the Arthur R. Outlaw Convention Center. Several ticketed events will be held in the Adam's Mark Hotel. Floor plans of both facilities are located inside the front and back covers of this program.

CONTRIBUTED PAPER, SYMPOSIUM, AND COLLOQUIUM SESSIONS

Contributed Paper and Colloquium Sessions include presentations that are scheduled for 15 minutes each (inclusive of questions and discussion). Most Symposium sessions include presentations that are scheduled for 30 minutes each (inclusive of questions and discussion).

POSTERS AND POSTER SESSION

Posters will be on display for the duration of the meeting in the Convention Center in the Grand Ballroom from 9:00 am to 5:00 pm Monday through Wednesday. A single conference-wide Poster Session for all societies is scheduled for Tuesday, July 29 from 12:30 pm to 2:00 pm (Session 24).

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 Monday, July 28, from 8:00 am to 12:00 pm. Poster take-down time is Wednesday, July 30 from 2:00 pm to 5:00 pm.

Neither the Convention Center Management, nor Botany 2003 management, are responsible for any poster materials remaining after 5:00 pm on Wednesday, July 30.

DISCUSSION SESSIONS

All Discussion Sessions will be held in the Convention Center. In addition to the standard AV setup noted below, a flip-chart will be provided in the session rooms.

AUDIO-VISUAL INFORMATION

Botany 2003 will again provide the opportunity for presenters to deliver computer-based presentations as a standard presentation option. Both 35mm slide and overhead projectors will also be available as standard options.

The Pentium III computers that will be provided within the Convention Center use Windows 2000 and Office 2000 suite including PowerPoint. The PowerPoint application will handle older versions as well as Macintosh saved as a 2000 or earlier version file.

For computer presentations, files should be accepted on CD ROMs, 3.5 floppy or 100MB Zip media. A centralized network will not be available.

PRESENTER'S ASSISTANCE ROOM

A Presenter's Assistance Room will be available in the Convention Center (Room 212) to help with presenters' questions and needs for sessions. The Presenter's Assistance Room will be open at the following times:

Saturday, July 26	8:00 am - 9:00 am
Sunday, July 27	11:00 am - 5:00 pm
Monday, July 28 - Wednesday, July 30	TBA

PRESENTATION PREVIEW ROOM

A preview room will be available in the Convention Center (Room 212). The room will be equipped with a slide projector and a computer setup and open from 8:00 am - 5:00 pm, Monday through Wednesday, July 28 - 30

Opening Ceremony



Sunday, July 27, 7:30 pm

Arthur R Outlaw Convention Center - Room 201 A - D

Plenary Address - Dr. Edward O. Wilson

Pellegrino University Research Professor, Harvard University

The All-Species Initiative and the Future of Life



Dr. Edward O. Wilson, Pellegrino University Research Professor, Emeritus, at Harvard University, is a preeminent biological theorist. He earned B.S. and M.A. degrees in biology from the University of Alabama, and a Ph.D. in biology from Harvard University. He joined the Harvard faculty in 1956 and distinguished himself over the next four decades as professor of zoology, curator in entomology at the Museum of Comparative Zoology, and researcher.

His accomplishments include pioneering work on chemical communication in the 1950s to 1970s, featuring a first comprehensive account of pheromones in ants, and (with William H. Bossert) a first evolutionary analysis of the physical and chemical properties of pheromones; the creation (with Robert H. MacArthur) of the theory of biogeography, a basic part of modern ecology and conservation biology; the creation of the discipline of sociobiology, in 1975; the first modern syntheses of knowledge of social insects (1971) and (with Bert Halldobler) of ants in particular, in 1990.

He also edited the volume *Biodiversity*, which in 1988 introduced the term and launched worldwide attention to the subject.

In 1984, with *Biophilia*, he introduced the concept of a genetically based tendency to affiliate and bond with parts of the natural world. His *The Diversity of Life* (1992), which brought together knowledge of the magnitude of biodiversity and the threats to it, had a major public impact.

Today he continues entomological and environmental research at the Museum of Comparative Zoology. Two of his 21 books have been awarded Pulitzer prizes: *On Human Nature* (1978) and *The Ants* (1990, co-authored with Bert Halldobler). Wilson's book *Sociobiology: The New Synthesis* (1975) extended neo-Darwinism into the study of social behavior. *Consilience: The Unity of Knowledge* (1998) draws together the sciences, humanities, and the arts into a broad study of human knowledge. His book, *The Future of Life* (2002), offers a plan for saving Earth's biological heritage. His most recent book is a monograph including 337 species new to science, *Pheidole in the New World: A Hyperdiverse Ant Genus* (Harvard, 2003).

In addition to his books, Dr. Wilson has written over 400 articles, most for scientific journals. Wilson has received some 75 awards in international recognition for his contributions to science and humanity, including the U.S. National Medal of Science (1976), Japan's International Prize for Biology (1993), the Crafoord Prize from the Royal Swedish Academy of Sciences (1990), the French Prix du Institut de la Vie (1990), Germany's Terrestrial Ecology Prize (1987), Saudi Arabia's King Faisal International Prize for Science (2000), and the Franklin Medal of the American Philosophical Society (1999).

For his conservation work he has received the Audubon Medal of the National Audubon Society and the Gold Medal of the World Wide Fund for Nature. He is also the recipient of 27 honorary doctoral degrees from North America and Europe.

BOOK SIGNING

Immediately following the address, Dr. Wilson will be available for a Book Signing in the Pre-function Area of the Convention Center.

ALL SOCIETY MIXER

Following the Plenary Address - 8:30-10:00pm - Convention Center. All registrants are invited to a welcoming mixer. A cash bar and complimentary refreshments will be available.

Monday, July 28, 11:00 am

Arthur R. Outlaw Convention Center - Room 204 A

Address by Dr. Paul A. Keddy

**Edward G. Schlieder Endowed Chair for Environmental Studies
Southeastern Louisiana University**

Wet and Wild: Conserving and Restoring Plant Diversity in Wetlands

Dr. Paul Keddy began the formal study of Biology in 1969 at York University in Toronto and during the summer worked as a naturalist in Algonquin Provincial Park. He completed his Ph.D. at Dalhousie University with E. C. Pielou, holding a prestigious 1967 Science Scholarship, and studying sand dune plants. During this time he also founded the Halifax Field Naturalists and served as their first president. He began work as a professor at the University of Guelph in 1978, teaching botany and ecology, and initiating research on wetland plants.

In 1982 he moved to the University of Ottawa, became a Full Professor, and then in 1999 moved south to become the first holder of the Edward G. Schlieder Endowed Chair for Environmental Studies at Southeastern Louisiana University. His web site address there is www.selu.edu/Academics/Faculty/pkeddy.

Keddy's first book, *Competition* (Chapman and Hall, 1989), won both the Lawson Medal and the Gleason Prize; a second edition was published by Kluwer Press (2001). His latest book is *Wetland Ecology: Principles and Conservation* (Cambridge University Press, 2000). Along with Dr. Evan Weiher, he has also edited *Ecological Assembly Rules: Perspectives, Advances, Retreats* (Cambridge University Press, 1999).

Over his career Dr. Keddy has published some hundred scholarly papers on plant ecology and wetlands, as well as serving organizations including the National Science and Engineering Research Council of Canada, World Wildlife Fund and the Nature Conservancy of Canada. His current research addresses the mechanisms producing diversity in wet pine savannas and in coastal marshes.



All field trips depart from and return to the the Convention Center. Participants should gather in the lobby. In all cases, dress should be suitable for outdoor activities and short hikes in weather that might 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.

Twenty-one field trips are scheduled before 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.

Field Trip Schedule

Pre-Conference - Saturday, July 26

6:30 am – 2:30 pm	FT 1	Pitcher-plant Bogs, Coastal Karst Ponds/Sinkholes, and Longleaf Pine Ecological Interactions in Conecuh National Forest
7:00 am – 6:30 pm	FT 2	A Pteridological Excursion to the Conecuh National Forest (Alabama) and Black Water River State Forest (Florida).
7:00 am – 6:00 pm	FT 3	Botanical Tour of Eglin Air Force Base
8:00 am – 3:30 pm	FT 4	Ecological Restoration of Wet Pine Savannas of the Gulf Coastal Plain
7:00 am – 4:00 pm	FT 5	The Barrier Islands of the Northern Gulf Coast and the World of Walter Anderson, Artist and Naturalist Extraordinaire
8:00 am – 4:00 pm	FT 6	Coastal Plain Bogs and Longleaf Pine
8:00 am – 4:00 pm	FT 7	Crosby Arboretum
8:00 am – 6:00 pm	FT 8	Botanical Highlights of Haines Island Recreation Area and Alabama's Chalk Prairies
8:00 am – 4:00 pm	FT 9	River, Forest, and Swamp Boat Tour at Deaton Preserve of The Nature Conservancy
6:30 am – 2:30 pm	FT 10	Relict Longleaf Savannas and Embedded Habitat Interdependency on Conecuh National Forest

Pre-Conference - Sunday, July 27

7:00 am – 4:30 pm	FT 11	Ferns of the Alabama Red Hills in Monroe and Conecuh Counties
8:00 am – 2:30 pm	FT 12	Coastal Dune System at Bon Secour National Wildlife Refuge
8:00 am – 2:30 pm	FT 13	Gulf Coast Maritime Forest Exploratory Tour
8:00 am – 2:30 pm	FT 14	Botanical Treasures of Clear Creek
8:00 am – 3:30 pm	FT 15	Marsh and Bottomland Forest/Swamp Boat Tour
8:30 am – 3:30 pm	FT 16	Ecology and Species of Brackish Marsh and Salt Pannes of the Northern Gulf
8:30 am – 5:30 pm	FT 17	Perdido River Canoe Trip
9:00 am – 5:00 pm	FT 18	Mesic Ravine Forests at Historic Blakeley State Park and Weeks Bay Pitcher-plant Bog

Post-Conference - Thursday, July 31

8:00 am – 3:00 pm	FT 19	Boat tour of the Mobile – Tensaw River Delta
8:00 am – 3:00 pm	FT 20	Pitcher-Plant Savannas and Barrier Island Dunes: Two Contrasting Environments of the Gulf Coastal Plain
8:00 am – 5:00 pm	FT 21	Lichens & Bryophytes of the Mobile Area

PRE-CONFERENCE - SATURDAY JULY 26

FT 1 Pitcher-plant Bogs, Coastal Karst Ponds/ Sink holes, and Longleaf Pine Ecological Interactions in Conecuh National Forest.....\$65.00

Saturday, July 26, 6:30 am – 2:30 pm

Leaders: Rhonda Stewart, Art Goddard, and Jay Edwards
Contact Information: Rhonda Stewart: Talladega National Forest, Shoal Creek District, 2309 AL Highway 46, Heflin, AL 36264; (256) 463-2272, rsstewart@fs.fed.us

National Forest Pitcher-plant bogs, cypress sloughs, and coastal karst ponds are just a sample of hydrologically-driven habitats to be featured on this trip through the Dougherty Plains section of the Conecuh National Forest. Through a series of stops and short hikes, participants will learn first hand how fire & water have played important roles in shaping and in maintaining the ecological health of the longleaf pine ecosystem that epitomizes much of the national forest and the American Southeast. In light of ongoing restoration and ecosystem management, the Conecuh National Forest functions as a biological refugia for some of the nation's rarest and most treasured flora, including such plants as *Macranthera flammula*, six species of *Sarracenia*, and a diversity of carnivorous plants. Be prepared for hot muggy weather (temperatures in the mid to upper 90s and humidity ranging from 80-100%); wear suitable clothing for the conditions, including long pants, hats and sun protection. Drinking water will be provided. Since some areas will be muddy, waterproof boots are recommended.

FT 2 A Pteridological Excursion to the Conecuh National Forest (Alabama) and Black Water River State Forest(Florida).....\$35.00

Saturday, 26 July, 7:00 am - 6:30 pm

Leaders: Patricia Cox and Garrie Landry
Contact Information: Patricia Cox: Dept. of Botany, University of Tennessee, Knoxville, TN 37996.
(865) 974-6225, pcox@utk.edu

The longleaf pine savannas of the Conecuh National Forest and Black Water River State Forest, have many distinct habitats such as Pitcher plant bogs, cypress sloughs, and sandy bottom black water rivers. We hope to see a variety of fern ally species including *Lycopodium* (sensu lato), *Selaginella*, *Equisetum*, and *Isoetes*. *Woodwardia virginica*, *W. areolata*, *Osmunda cinnamomea*, *Osmunda regalis*, and *Thelypteris* species are quite common in this region. Please be prepared for hot muggy weather and it is highly recommended that you wear long pants and boots that you don't mind getting wet. You will also need sun and insect protection and plenty of water. Lunch will be provided.

Program

FT 3 Botanical Tour of Eglin Air Force Base.....\$75.00

Saturday, July 26, 2003, 7:00 am – 6:00 pm

Leaders: Brenda Herring, Linda Chafin, and Carolyn Kindell
Contact Information: Brenda Herring, Florida Natural Areas Inventory, 1018 Thomasville Rd., Suite 200-C, Tallahassee FL 32303; (850) 224-8207, bherring@gnv.fdt.net

Eglin Air Force Base is located in northwest Florida covering ca. 463,448 acres within Santa Rosa, Okaloosa, and Walton counties. A high diversity of both natural communities and rare plants occur on Eglin. The natural communities and the plants and animals that inhabit them not only receive protection by being within this federal military reservation, but are thriving there due to Eglin's active Ecosystem Management practices. Our itinerary for the day will cover many miles, but due to time limitations, we will primarily look at the northwest portion of the base. The trip will begin with a visit to Weaver Creek where we will see a large population of *Lilium iridollae* in flower. Within this seepage stream, other rarities can be observed such as *Drosera intermedia* and *Nuphar lutea* ssp. *ulvacea*. Our next stop will be at Boiling Creek where we will take a quick look at floating mats of white-top floating pitcher plants (*Sarracenia leucophylla*). Next, we will head to Whitmier Island, a large and frequently fire-maintained wet prairie, where numerous forbs and graminoids will be in flower. A visit will then be made to one of Eglin's most distinctive topographic features – a steephead. The headwaters of Weaver Creek form within this steephead. Distinguished by having steep slopes which are dominated by hardwoods such as *Magnolia ashei* and the base of the slope having considerably cooler temperatures with distinct plants such as *Illicium floridanum*. After lunch, we will visit the East Bay flatwoods. Excellent examples of fire-maintained mesic flatwoods will be observed here and we will see *Calamovilfa curtissii* among numerous other plants of interest. Next, we will proceed to the Patterson Natural Area, an area of high quality sandhill with old growth longleaf pine (*Pinus palustris*). Potential rare plants to encounter within the sandhills are *Tephrosia mohrii* and *Baptisia calycosa* var. *villosa*. A stop at Live Oak Creek will allow us to get another peek at the white top pitcher plants. If there is enough time left when we get to this point, we will head south to the Gulf of Mexico and observe within the barrier island, the federally endangered lichen – *Cladonia perforata*. Please note that all or portions of this itinerary are subject to change due to military security issues. Alternative sites have already been pre-determined and promise to be of interest if the trip should have to be made off site. The trip will include a mix of short walks (just a small amount of bushwhacking) and quick stops out of the vehicle. Plan to get your feet wet, to be warm, and to have bugs in close proximity. Recommended field gear: shoes that are comfortable, but that can withstand getting wet or mucked up, sun protection (hat, sun-screen, or long-sleeve light colored shirt), lots of drinking water, and insect repellent. Each participant will be charged a \$1.00 permit fee for access onto Eglin. Bring a picture ID card in case we have to show identification to military authorities and cash for a mid-day lunch stop.

**FT 4 Ecological Restoration of Wet Pine
Savannas of the
Gulf Coastal Plain.....\$63.00**

Saturday, July 26, 8:00 am – 3:30 pm

Leaders: Scott Hereford, Andre' Clewell, and Cynthia Ramseur

Contact Information: Scott Hereford: Mississippi Sandhill Crane National Wildlife Refuge, 7200 Crane Lane, Gautier, MS 39553; (228) 497-6322, scott_hereford@fws.gov

Mississippi's coastal habitats have long been regarded as important harbors of biological diversity. The Sandhill Crane National Wildlife Refuge was established as mitigation for the construction of I-10 through southern Mississippi and the last vestige of the Mississippi sandhill crane home range. The Refuge was established to provide habitat for a sustainable population of the endangered Mississippi sandhill crane. The National Wildlife Service and The Nature Conservancy, at Old Fort Bayou Mitigation Bank, have extensive programs devoted to restoring wet pine savanna, which is the main habitat used by the endangered crane. Extensive burning programs and other restoration activities are being implemented. The tour will visit the USFWS headquarters hiking trail which extends through one of the most spectacular examples of wet pine savanna/bayou system in Mississippi. The exquisite diversity and color of the savanna is revealed after a prescribed burn has taken place. During other stops to actual restoration areas, such as The Old Fort Bayou Mitigation Bank, the species composition and ecology of the wet pine savannas will be demonstrated. The theory, methodology, challenges, and successes of ecological restoration of this ecologically important and endangered community will be reviewed. Although this will be a leisurely tour, participants are asked to bring water, sun protection, and wear comfortable walking shoes and light clothing. Lunch will be provided.

**FT5 The Barrier Islands of the Northern
Gulf Coast and the World of
Walter Anderson, Artist and Naturalist
Extraordinaire.....\$148.00**

Saturday, July 26, 8:00 am – 4:00 pm

Leaders: Diane Ehrman and Ronald Wieland

Contact Information: Diane Ehrman: The Nature Conservancy, Ocean Springs Field Office, 1709 Government Street, Ocean Springs, MS 39564; (228) 872-8452, dehrman@tnc.org

The barrier islands consist of sands deposited by modal westward currents of the Gulf. The islands form the outer boundary of the Mississippi Sound and coastal estuaries. On the boat trip out to Horn Island, the tour guides will provide interesting discussions about the northern gulf ecosystem but ample opportunity will be available to view the Mississippi Sound and its picturesque coastal

landscape. Upon reaching Horn Island, part of a designated wilderness, the tour will focus on the ecology and flora of the island while weaving the story of the life and times of Walter Anderson, who, over a half century ago, restlessly and colorfully painted the landscape, flora, and fauna of this land of exquisite beauty. Walter Anderson, a naturalist and artist, rowed and sailed to Horn Island and the Chandeleurs. He drew and painted the plants and animals, especially birds, in every conceivable stage and activity. In 1985, Redding Sugg, Jr. published *The Horn Island Logs* of Walter Inglis Anderson - a document that includes his journal entries, drawings, and watercolors along with his philosophy and land ethic. His poignant writings as a naturalist ideals spell a vision that modern society could well heed today. His relationship with Horn Island that matured over a period of 20 years is evident in his abundant works of art, which is currently housed in the Walter Anderson Museum of Art in Ocean Springs. Hopefully we can squeeze all of this into a one-day trip. But we also need to visit the interpretive center at the Gulf Islands National Seashore Headquarters. Please bring drinking water, insect repellent, and sun protection (hat, sun-screen). Lunch will be provided.

**FT 6 Coastal Plain Bogs and
Longleaf Pine.....\$42.00**

Saturday, July 26, 8:00 am – 4:00 pm

Leaders: Tate Thriffiley, Lisa Yeger, and Bruce Sorrie

Contact Information: Tate Thriffiley: DeSoto National Forest, 654 West Frontage Road, P. O. Box 248, Wiggins, MS 39577; (601) 928-4422, tatethriffiley@fs.fed.us

Natural stands of longleaf pine and exceptionally diverse coastal plain bogs will be the highlights of this field trip to the De Soto National Forest of Mississippi. Depending on time constraints, the stops could include visits to Buttercup Flats, Harrison Experimental Forest's old growth longleaf pine stand, Ole Miss lands upland longleaf and bogs (Upper Railroad Creek), Moores Crossing, and Camp Shelby Training Site. Other areas of interest include Tuxachane Trail, Leaf River Wilderness Area. Longleaf pine forests representing a variety of moisture regimes will be visited. Xeric sites are found at Harrison Experimental Forest and Little Florida (White Plains Conservation Site); mesic and wet sites are found on former Ole Miss lands and the Larue Longleaf Macrosite. Species packing rates for the diverse bogs are among the highest of any vegetation type in North America, if not the world. The bogs are sprinkled with yellow trumpets, pink orchids, butterworts, red lilies, bright orange milkweeds, white bog buttons, yellow sundews, and various meadowbeauties. Some areas may be wet; please wear proper footgear and bring water, insect repellent, and sun protection. Lunch will be provided.

FT 7 Crosby Arboretum.....\$42.00**Saturday, July 26, 8:00 am – 4:00 pm**

Leader: Robert Brzuszek

Contact Information: Robert Brzuszek: Senior Curator, Crosby Arboretum, 370 Ridge Road, P. O. Box 1639, Picayune, Mississippi 39466; (601) 799-2311, crosbyar@datastar.net

If you want a glimpse of the diverse array of native plants of the northern Gulf Coast, the Crosby Arboretum is the place for you. The Arboretum is packed with native plants in a variety of attractive landscaped settings. Fewer and fewer places remain that return us to our origins in the natural world. The Crosby Arboretum serves to preserve our living heritage and deepen our understanding of the Earth's environment. It is a regional nature center celebrating the outdoors and the spirit of the people of south Mississippi. Pinecote is a 64-acre educational center of The Crosby Arboretum. Its is a former strawberry field and pine plantation converted to express the best elements of the Arboretum's conservation areas of more than 1000 acres of interrelated plant communities and over 700 plant species. Woodland, wetland, and savanna vegetation types are featured at the Arboretum. The Crosby Arboretum invites you to explore the botanical legacy of the Piney Woods. Fire is used to suppress some woody plants and encourage new tree and plant growth. Plants are labeled to acquaint you to the wide variety of species native to the region. Lunch will be provided.

FT 8 Botanical Highlights of Haines Island Recreation Area & Alabama's Chalk Praries.....\$85.00**Saturday, July 26, 8:00 am – 6:00 pm**

Leaders: Al Schotz, Linda Schotz, and James Burkhalter

Contact Information: Al Schotz: Alabama Natural Heritage Program, Huntingdon College, Massey Hall, Montgomery, AL 36106; (334) 834-4519, aschotz@alnhp.org

Located in the Red Hills of southern Alabama, Haines Island serves as a microcosm of the majestic pine – hardwood forests that were once commonplace throughout the region. Steep slopes forested with old growth *Pinus glabra*, *Magnolia grandiflora*, *Fagus grandifolia*, *Quercus alba*, and *Fraxinus americana* will greet the group as we explore several of the area's footpaths. Reminiscent of the southern Appalachians, the site exemplifies a botanical cross-roads where an array of northern species, near their southern geographical range limits, mingle with needle palm and Spanish moss, a flora more indicative of subtropical regions. From here we'll travel north to Alabama's premier prairie region, the Black Belt Physiographic Province, to witness a kaleidoscope of summer-blooming wildflowers and grasses that will conjure images of the mid-western prairies. A series of short stops will also be featured to introduce participants to the geological setting of the region, where visitors may observe samples of fossiliferous white chalk outcrops that sets

the Black Belt apart from any other region in the Southeast. This tour will also be accented by discussions on the region's rich cultural heritage that was instrumental in guiding the state's historical legacy. Bring water, insect repellent, and sun protection. Lunch will be provided.

FT 9 River, Forest, and Swamp Boat Tour at Deaton Preserve of The Nature Conservancy.....\$65.00**Saturday, July 26, 8:00 am – 4:00 pm**

Leader: George Ramseur

Contact Information: George Ramseur: Project Director, Old Fort Bayou Mitigation Bank, Ocean Springs Field Office, 1709 Government Street, Ocean Springs, MS 39564; (228) 872-8452, gramseur@tnc.org

Take a jet boat for a spectacular trip along the upper Pascagoula River at the confluence of the Chickasawhay and Leaf Rivers. This river system remains as one of the few undammed rivers of the Gulf Coastal Plain. Enjoy an up close and personal view of the patterns and processes of the river and its associated bottomland forest; see the raw power of the river and the vegetation within this floodplain system. View the variety of communities that occupy the levees, bottoms, and riverine swamps. Get to know the aquatic and bottomland species found here. Impressive cypress and water tupelo swamps and mixed hardwood bottomlands of oak, hickory, elm, sugarberry, and sweetgum, will catch your eye and send your imagination to primeval times. Lunch will be provided. Participants should bring water, insect repellent, and sun protection.

PRE-CONFERENCE - SUNDAY, JULY 27**FT 10 Relict Longleaf Savannas and Embedded Habitat Interdependency on Conecuh National Forest.....\$55.00****Sunday, July 27, 6:30 am – 2:30 pm**

Leaders: Rhonda Stewart, Art Goddard, and Jay Edwards

Contact Information: Rhonda Stewart: Talladega National Forest, Shoal Creek District, 2309 AL Highway 46, Heflin, AL 36264; (256) 463-2272, rsstewart@fs.fed.us

The rolling topography of the pine hills of the Conecuh National Forest hosts some of the finest remaining ecologically intact longleaf pine savannas to be found anywhere in the southeastern United States. An incredibly rich tapestry of grasses, wildflowers and relict longleaf awaits participants as they are guided on a series of short walks through an array of interconnected upland habitats, which interact with embedded rare communities to produce a landscape unique to the Southeast. Ecology, geology, restoration efforts, and the special adaptations of plants and animals to survive in this fire-dependent system are some of the topics to be

discussed during the trip. Due to a high degree of endemism, as well restoration efforts that acknowledge the complex ecological interactions of habitats in the Lower Gulf Coastal Plain, the Conecuh National Forest acts as a haven to such rare treasured species such as *Lilium iridollae*, *Ruellia noctiflora*, and a wealth of wild orchids. Although topography won't be challenging, participants should be prepared for hot weather (temperatures in the mid to upper 90s and humidity ranging from 80-100%); wear suitable clothing for the conditions, including long pants, hats, sturdy boots and sun protection. Drinking water will be provided

FT 11 Ferns of the Alabama Red Hills in Monroe and Conecuh Counties\$35.00

Sunday, 27 July, 7:00 am - 4:30 pm

Leaders: Patricia Cox and Garrie Landry

Contact Information: Patricia Cox: Dept. of Botany, University of Tennessee, Knoxville, TN 37996. (865) 974-6225, pcox@utk.edu

The Alabama Red Hills is a botanical crossroads where some northern species have found a refugium and the southern species flourish in the subtropical habitats. *Dryopteris celsa* and *Adiantum pedatum* can be found as well as their more southern counterparts, *Dryopteris ludoviciana* and *Adiantum capillus-veneris*. These old growth Beech-Magnolia woods are also host to a number of other fern species such as *Pleopeltis polypodioides*, *Thelypteris ovata*, *Pteris multifida*, *Woodsia obtusa*, *Asplenium platyneuron*, and *Athyrium filix-femina*. Several tropical species of ferns such as *Cyrtomium falcatum*, *Lygodium japonicum* and *Deparia petersonii*, have invaded these areas. If we search hard enough, we might find *Trichomanes petersii* growing at the base of the Southern Magnolia or America Beech.

Please be prepared for hot muggy weather and it is highly recommended that you wear long pants and boots that you don't mind getting wet. You will also need sun and insect protection and plenty of water. Lunch will be provided.

FT 12 Coastal Dune System at Bon Secour National Wildlife Refuge.....\$64.00

Sunday, July 27, 8:00 am – 2:30 pm

Leader: John Hays

Contact Information: John Hays: 601/354-7303, ext. 115, Mississippi Museum of Natural Science, 2148 Riverside Dr., Jackson, MS 39202, john.hays@mmns.state.ms.us

The coastal dune systems of the Alabama and Florida panhandle coast are a unique and increasingly rare community type. This remarkable community type consists of coastline, open dunes, fresh and salt water marshes, interdunal swales, scrub habitat, and upland mixed pine-hardwood forests. Bon Secour National Wildlife Refuge serves as an important stop over for neotropical migratory birds as well as nesting sites for green and loggerhead turtles. The

trip will be on a marked trail of approximately 0.8-1.0 miles in length; some of the trail has deep sand and part of the trail will be in scrub habitat, so a hat and fluids are recommended due to the severe heat that can be present during this time of the year on the Alabama coast. We will see a wide variety of plant species from several species of oaks that grow only along the coast in xeric conditions to a number of wetland species of both fresh and salt water systems, to include a myriad of *Hypericum* spp. Part of the trail also traverses a more mixed, mesic coastal plain pine-hardwood forest as well. Lunch will be provided.

FT 13 Gulf Coast Maritime Forest Exploratory Tour.....\$64.00

Sunday, July 27, 8:00 am – 2:30 pm

Leader: Bill Finch

Contact Information: Bill Finch: Mobile Register, P. O. Box 2488, Mobile, AL 36652; (251) 219-5630, Bfinch@mobilerregister.com

Maritime forests have become one of the most imperiled plant systems along the Gulf Coast. Formerly widespread throughout the region, all that now remain are small isolated vestiges such as this example at Orange Beach, Alabama. Stately live oaks festooned with Spanish moss (*Tillandsia usneoides*) and colonies of resurrection fern (*Pleopeltis polypodioides* var. *michauxiana*) will impart a classic image of southern charm that the participant will not soon forget. Botanically, maritime forests function as a refuge for a suite of shade-loving species unable to tolerate the hot windy conditions of the surrounding pinelands. Highlighting this tour will be an impressive array of plant life uniquely adapted to the specialized environmental setting of this association, including several global and regional rarities such as needle palm, nodding nixie, loblolly bay, Arkansas oak, and if we're lucky the state's only epiphytic orchid, the greenfly orchid (*Epidendrum conopseum*). Walking will be easy, but participants may wish to bring drinking water and insect repellent. Lunch will be provided.

FT 14 Botanical Treasures of Clear Creek.....\$64.00

Sunday, July 27, 8:00 am – 2:30 pm

Leader: James Burkhalter

Contact Information: James Burkhalter: 788 Deedra Avenue, Pensacola, FL 32514; (850) 476-6177

Participants will experience a good representation of the region's floral diversity on a leisurely 1.5-mile walk along the Clear Creek Nature Trail. This trail, established at the Whiting Field Naval Air Station near Milton, Florida, also features a 2,000-foot boardwalk that will enable visitors to examine a rich assortment of vegetation and wildlife unique to the wetlands of the Southeast, including striking showcases of the globally threatened white-top pitcher-plant (*Sar-*

racenia leucophylla) and Coville's rush (*Juncus gymnocarpus*). After lunch at a nearby picnic area, we will travel to M. G. Mayo Park to observe one of the world's only few known occurrences of the Florida pondweed (*Potamogeton floridanus*), a narrow endemic confined to blackwater streams of the western Florida Panhandle and adjacent Alabama. Bring drinking water and sun protection. Lunch will be provided.

FT 15 Marsh and Bottomland Forest/ Swamp Boat Tour.....\$130.00

Sunday, July 27, 8:00 am – 3:30 pm

Leader: Mark LaSalle and M. Wayne Morris

Contact Information: Mark LaSalle: Mississippi State University Coastal Research and Extension Center, 2710 Beach Boulevard, Suite 1-E, Biloxi, Mississippi 39531; (228) 388-4710, markl@ext.msstate.edu

The Pascagoula River is one of the northern hemisphere's largest free flowing river systems. The river and both of its major tributaries, the Leaf and Chickasawhay Rivers remain undammed. The extensive coastal marsh and bottomland hardwood forest ecosystem of the Pascagoula River present over 100,000 acres of forested habitat for exploration. The tour will begin with a stop at a beech-magnolia bluff forest, representing areas somewhat protected from natural fires. The mesic habitats support a diverse mixed semi-deciduous hardwood forest of massive trees, including six species of magnolias, silky camelia, needle palm, and yellow crested orchis. From there the group will transfer to boats for a float trip down the river through the Pascagoula floodplain forest. The flora and ecology of the bottomland forests will be studied along the way. Continuing southward, the vegetation changes along a gradient of tidal influence and salinity. The vegetation gradually changes from bottomland forest to swamp, then to dwarf swamp and shrublands and finally to marshlands at about 7 miles above the mouth of the river. The saline gradient effects the composition of the marsh, allowing a diverse mixture of herbs in the freshwater zone to less diverse brackish zone dominated by black needlerush. Participants are asked to bring plenty of water and sun protection (long-sleeve shirt, sun-screen, hat). Lunch will be provided.

FT 16 Ecology and Species of Brackish Marsh and Salt Pannes of the Northern Gulf.....\$83.00

Sunday, July 27, 8:30 am – 3:30 pm

Leaders: Dave Ruple, Jennifer Buchanan, Jeff Clark, and Pon Dixon

Contact Information: Dave Ruple: Reserve Manager, Grand Bay National Estuarine Research Reserve, 6005 Bayou Heron Road, Moss Point, MS 39502; (228) 475-7047, david.ruple@dmr.state.ms.us

A boat trip will take us from the Bayou Cumbest or Bayou Heron Landing to view the marshes and open waters of the Mississippi Sound. Representative habitats of the area include the ancient delta of the Escatawpa River, old levees, shell middens, his-

torically deposited by American Indians, the expansive irregularly flooded marshes, and the backdrop of pine savannas. This panorama presents an uplifting view of coastal Mississippi and gulf waters. The marsh ecosystem will be studied at convenient stops along the bayou tour. The irregularly flooded marshes are dominated by *Juncus roemarianus* but also contain a fringe of *Spartina alterniflora*. Various salt tolerant species of *Batis*, *Distichlis*, *Salicornia*, and *Sueda* species occupy the salt pannes. The ecology and the variety of species that occupy the marshes and salt pannes will be the highlight of the trip. A diverse array of birds, fishes, and crustaceans are supported by this rich estuarine system. The Grand Bay Reserve and Refuge are composed of a contiguous system of wetlands, from the brackish marshes in the south, to the cypress/pitcher plant bogs several miles to the north. An additional stop will be made within the Refuge to view the incredible plant diversity found within the wet pine savannas, which includes a large population of *Sarracenia rosea*. Bring drinking water and sun protection. Lunch will be provided.

FT 17 Perdido River Canoe Trip.....\$100.00

Sunday, July 27, 8:30 am – 5:30 pm

Leaders: Al Schotz and Linda Schotz

Contact Information: Al Schotz: Alabama Natural Heritage Program, Huntingdon College, Massey Hall, Montgomery, AL 36106; (334) 834-4519, aschotz@alnhp.org

The Perdido River originates in the Gulf Coastal Plain Physiographic Province gently meandering along the Alabama-Florida state line for nearly 60 miles to the Gulf of Mexico. Recognized as one of the premier canoeing streams along the northern Gulf Coast, the river is lined with sugar white sandbars, magnificent stands of Atlantic white cedar, cypress swamps, and in a few places, the globally imperiled West Florida pondlily (*Nuphar lutea* ssp. *ulvacea*). This 5-mile trip will feature a series of short stops where we will learn about the rich cultural history and remarkable natural heritage that has come to make this area so special. Depending on seasonal precipitation, we may encounter strong currents, so some canoeing experience is desirable. Bring drinking water, swimming gear (optional), sun protection (sun-screen, hat), and wear light clothing. No bathrooms. Glass bottles are not permitted on the river. Lunch will be provided.

FT 18 Mesic Ravine Forests at Historic Blakeley State Park and Weeks Bay Pitcher-plant Bog.....\$20.00

Sunday, July 27, 9:00 am – 5:00 pm

Leaders: Fred Nation and Harry Larsen

Contact Information: Fred Nation: 120 Havenwood Circle, Daphne, AL 36526; (251) 626-6816, frednmoe@worldnet.att.net

The 3,800-acre Historic Blakeley State Park contains some of the finest examples of mesic ravine forests to be found along the

Gulf Coast. Situated along the eastern side of the Mobile – Tensaw River Delta, the park also contains an exemplary representation of bottomland hardwood forest, accented by a myriad of cypress-lined sloughs. The park is regionally renown for its exceptional floral diversity, serving as the southern range limit for plants more commonly found further north such as *Magnolia macrophylla* and *Gentiana catesbaei*. Once departing from Historic Blakeley State Park, we will embark on a scenic tour to our next stop, the Weeks Bay National Estuarine Delta, the park also contains an exemplary representation of bottomland hardwood forest, accented by a myriad of cypress-lined sloughs. The park is regionally renown for its exceptional floral diversity, serving as the southern range limit for plants more commonly found further north such as *Magnolia macrophylla* and *Gentiana catesbaei*. Once departing from Historic Blakeley State Park, we will embark on a scenic tour to our next stop, the Weeks Bay National Estuarine

POST CONFERENCE - THURSDAY, JULY 31

FT 19 Boat tour of the Mobile – Tensaw River Delta.....\$84.00

Thursday, July 31, 8:00 am – 3:00 pm

Leader: Smoot Major

Contact Information: Smoot Major: Department of Biological Sciences, University of South Alabama, LSCB – 236, Mobile, AL 36688; (251) 460-7943, smajor@usouthal.edu

Together, the Mobile-Tensaw River Delta and the adjacent Mobile Bay estuary form the largest intact wetland system in North America, draining more than 60 percent of Alabama and portions Georgia and Mississippi. The maze of waterways, swamps, and forests that characterize the 300,000-acre delta is home to a remarkable diversity of plant and animal life. From the comfort of a canopied pontoon boat participants may catch a glimpse of the Southeast's rarest and most cherished wildlife such as the American alligator, swallow-tail kite, and the endemic Alabama red-bellied turtle. The delta also functions as a refuge for an exceptional concentration of plant life, hosting an array of rare species in addition to impressive displays of American lotus (*Nelumbo lutea*), rose-mallows (*Hibiscus* spp), and various iris (*Iris* spp.) This tour will include at least one stop where visitors may disembark and experience the region's solitude and wilderness qualities, perhaps evoking images and thoughts associated with pre-settlement times. Muddy conditions and biting insects are likely to be encountered, so participants are strongly encouraged to bring insect repellent and wear low-cut boots or shoes that can get wet. Lunch will be provided.

FT 20 Pitcher-Plant Savannas and Barrier Island Dunes: Two Contrasting Environments of the Gulf Coastal Plain.....\$50.00

Thursday, July 31, 8:00 am – 3:00 pm

Leader: Al Schotz

Contact Information: Al Schotz: Alabama Natural Heritage Program, Huntingdon College, Massey Hall, Montgomery, AL 36106; (334) 834-4519, aschotz@alnhp.org

The Grand Bay region in the southwestern-most portion of Alabama and adjacent Mississippi supports some of the finest longleaf pine – slash pine savanna flatwoods systems to be found in the Southeast. Characterized as a mosaic of open pine savannas, cypress stringer swamps, gum ponds, and sluggishly meandering coastal streams, the site has been well known to bird and plant enthusiasts for its remarkable concentration of wildlife and rich diversity of flora. Designated as a "Last Great Place" by the Nature Conservancy, the complex of habitats at Grand Bay contain no less than 55 plant and animal species classified as rare or endangered by the Mississippi and Alabama Natural Heritage Programs. After lunch at a local seafood restaurant (cost not included in trip price), we will visit the Dauphin Island Audubon Sanctuary to observe a striking example of Gulf coastal scrub and learn about the ecology and management issues now confronting this unique habitat. Participants are encouraged to wear comfortable walking shoes that can get wet. Drinking water, sun-screen, and a hat are also recommended.

FT 21 Lichens and Bryophytes of the Mobile Area.....FREE

Thursday, July 31, 8:00 am – 5:00 pm

Leader: Bill Buck

Contact Information: Bill Buck

New York Botanical Garden Bronx, NY 10458-5126, bbuck@nybg.org

Several bryological and lichenological collecting sites will be visited in the Alabama Red Hills, including old growth Beech-Magnolia woods that provide a variety of unique habitats for epiphytes. Haines Island in Monroe County, Ala. includes old growth *Pinus glabra*, *Magnolia grandiflora*, *M. virginiana*, *M. macrophylla*, *Fagus grandifolia*, *Liriodendron tulipifera*, *Quercus alba*, and *Fraxinus americana*, *Carpinus caroliniana*, *Ilex opaca*, *Liquidambar styraciflua* along stream ravines and steep slopes. We also plan to visit "Liverwort Gorge" and the Salt Mountain limestone area near Dothan, Ala., and a state wildlife area near Jackson, Ala. Numerous bryophyte species in the genera *Riccardia*, *Rectolejeunea*, *Fissidens*, *Conocephalum*, *Marchantia* and *Cololejeunea* can be observed and collected. Please be prepared for hot weather, wear long pants and bring boots. You will also need sun and insect protection and plenty of water. Lunch will be provided.

Workshop Schedule



All Workshops will be held on Sunday, July 27. Please read the Refund and Cancellation Policy. Workshops are ticketed events; tickets may be purchased 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 purchased ticket. Workshops will be held in the Mobile Convention Center (MCC) and at University of Southern Alabama (USA) campus (transportation will be provided). Buses will leave from the Lobby of the Convention Center at the time specified on your ticket.

MORNING

8 am - 10 am	W-1	Producing, Publishing, and Sharing Curriculum Materials in the Plant Sciences (<i>USA - LSCB 139</i>)
8 am - 12 pm	W-2	Plant Biologists Reaching Out: Planning and Delivering Teacher Workshops (<i>USA - LSCB 240</i>)
8 am - 12 pm	W-3	Getting to the Roots of Plant Evolution: Genomics and the Reconstruction Tree of Life (<i>USA - LSCB 137</i>)
8 am - 12 pm	W-4	Tips on Writing NSF-CCLI Proposals (<i>MCC - 202A</i>)



AFTERNOON

1 pm - 5 pm	W-6	Implementing A Cooperative Group Learn Environment in Hands-On Biology Labs for Nonmajors: Lessons from the Trenches (<i>LSCB-240</i>)
1 pm - 5 pm	W-7	Conservation Status & Management of Bog Communities in the Southeastern US (<i>USA - LSCB 139</i>)
1 pm - 3 pm	W-8	Teaching through Inquiry (<i>MCC - 203B</i>)



ALL DAY

8 am - 5 pm	W-5	Using Lucid Software for Making Interactive Keys (<i>USA - LSCB 131</i>)
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MORNING

W-1 Producing, Publishing, and Sharing Curriculum Materials in the Plant Sciences.....\$25.00

8 am - 10 am
University of South Alabama - LSCB 139

Presenter: Michael W. Clayton, Department of Botany, University of Wisconsin - Madison, Madison, WI 53706, 608-262-2333, clayton@wisc.edu

Target Audience: Teachers all levels

Producing course-specific curriculum materials allows educators to better focus on specific learning objectives. This is particularly important for the teaching laboratory where students can become distracted by non essential procedures and awkward formatting. Using multimedia, the production of quality teaching materials, such as lab manuals and web-based lessons, is easily in the grasp of any dedicated teacher. In this workshop, we will share and discuss some of the curriculum materials we have developed at the University of Wisconsin with an emphasis on the learning objectives underlying the creation of these materials, and the methods used in their development. The materials demonstrated, may be used and modified by the participants after the workshop. These, and other resources useful for the development of customized course materials, are available through the University of Wisconsin-Madison. Our materials may be freely sampled via the web page at <http://botit.botany.wisc.edu>. Rights of distribution are granted through the purchase of our CD, Multimedia Toolkit for Educators in the Life Sciences. Proceeds from the sale of CDs are returned to the university to support undergraduate education. We hope this workshop will encourage others to follow our lead in producing and distributing materials aimed towards educators who desire to author their own curriculum content.



W-2 Plant Biologists Reaching Out: Planning and Delivering Teacher Workshops.....\$50.00

8 am - 12 pm
University of South Alabama - LSCB 240

Presenters: D. Timothy Gerber, University of Wisconsin - La Crosse, La Crosse, Wisconsin 54601, gerber.dani@uwla.edu; and

David W. Kramer, Ohio State University at Mansfield, Mansfield, Ohio 44906, kramer.8@osu.edu

Target Audience: Faculty and Graduate Students

The Botanical Society's report *Botany for the Next Millennium* (BSA, 1995) charges each of us to elevate the importance of effective teaching in our own institutions. But it doesn't stop there! It goes on to say, "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." Many plant biologists in universities have limited experience in working with teachers at other levels of education. Those who want to accept this challenge soon discover there is much to know about outreach to pre-service and in-service teachers. The organizers of this workshop have delivered successful workshops for teacher professional development and want to share what they have learned. But this workshop's goal is to move beyond "show and tell." Participants will begin planning their own teacher workshops. Planning in this setting will allow you to ask critical questions relating to goals, content, hands-on activities, effective use of technology, curriculum integration, recruiting, funding, follow-up, and other elements.

W-3 Getting to the Roots of Plant Evolution: Genomics and the Reconstruction Tree of Life.....FREE

8 am - 12 pm
University of South Alabama - LSCB 137

Presenter: Brent Mishler, University and Jepson Herbaria, University of California, Berkeley, Berkeley, CA 94720-2465, bmishler@socrates.Berkeley.edu

Target Audience: High School Teachers & Faculty and Graduate Students

Phylogenetic analyses using molecular and morphological data have yielded stunning results about the tree of life and how all organisms on earth are related to each other. The use of phylogenetic methods to understand evolution-

ary history has become a common theme throughout science. Understanding the concepts and basic methodology of these relatively new techniques is an important component of science education at the high school and undergraduate college levels.

This workshop will provide an introduction to phylogenetic methods using examples from the green plants. Using material that is easily accessible nationwide, we will conduct a hands on demonstration of a classroom exercise appropriate for grades 9 - 12 and introductory biology classes at the university level. Using a simple phylogenetic analysis with morphological and genomic data, we will explore the evolutionary relationships of land plants. Results will be used to discuss adaptation to life on land, radiation of the angiosperms, molecular evolution, and the new classification of green plants.

This workshop will provide a foundation for students to (1) conduct a scientific investigation by collecting, categorizing, and analyzing data, (2) read and analyze data summarized in a cladogram, and (3) understand basic evolutionary concepts such as adaptation, diversification, symbiosis, and convergent evolution.

Sponsored by the National Science Foundation (Grant DEB-0090227), The Deep Gene Research Coordination Group exists to integrate green plant phylogenetics and genomics. The group is exploring ways in which comparative phylogenetic studies can inform functional genomic studies, and knowledge of plant genomes can inform the understanding of phylogenetic relationships. For more information, please visit our web site (<http://ucjeps.herb.berkeley.edu/bryolab/deepgene/>).

W-4 Tips on Writing NSF-CCLI Proposals.....\$10.00

8 am - 12 pm
Convention Center - Room 202A

Presenter: Katherine Denniston, National Science Foundation, Division of Undergraduate Education (DUE), 4201 Wilson Boulevard, Suite 840, Arlington, Virginia 22230, 703-292-4620, kdennist@nsf.gov

Target Audience: Undergraduate/Graduate

This session will highlight NSF Division of Undergraduate Education Course, Curriculum, and Laboratory Improvement (CCLI) program. We will begin with an overview of the four tracks of the CCLI program: Educational Materials Development (EMD), Adaptation and Implementation (A&I), National Dissemination (ND), and Assessment of Student Achievement (ASA). We will discuss the key characteristics of a competitive proposal, using examples of funded botany projects. We will also consider the proposal submission/review/award process, as well as the "Seven Top Ways to Blow a Proposal." Our intent is to help you take your idea and turn it into the most competitive proposal possible.

Attendees will participate in a simulated panel review using an actual funded proposal in order to get a deeper understanding of the review process. We will discuss how the review process should impact proposal development in order to maximize the competitiveness of a submitted proposal.



AFTERNOON

W-6 Implementing A Cooperative Group Learning Environment in Hands-On Biology Labs for Nonmajors: Lessons from the Trenches.....\$27.00

1 pm - 5 pm
University of South Alabama - LSCB 240

Presenter: Staria Vanderpool, Department of Biological Sciences, Arkansas State University, State University, AR 72467, svand@astate.edu

Target Audience: Undergraduate/Graduate

A hands-on workshop for people who may be considering modification of lab experiences for nonmajors biology lab from a traditional confirmatory/demonstration model to an investigational model. During the past three years our department has been involved in a transition to problem-based investigational labs for the nonmajor biology lab.

Our typical annual student enrollment in the lab is 1500 students so there are significant logistical problems involved in developing, staffing, and managing this 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 increasingly positive as we have 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-7 Conservation Status & Management of Bog Communities in the Southeastern US.....\$25.00

1 pm - 5 pm
University of South Alabama - LSCB 139

Presenters: Lawrence R. Stritch and Levester Pendergrass, USFWS/NCTC, Route 1 Box 166, Shepherdstown, WV25401, 304-876-7466, lstritch@fs.fed.us

Target Audience: Undergraduate/Graduate

The purpose of this workshop is to raise awareness of bog communities in the southeastern, U.S. This workshop proposes to have an introductory speaker to introduce the topic. A speaker will follow this from TNC that will discuss the classification of bog communities in the southeast and their conservation status. The remainder of the workshop will address various management concerns such as fire ecology, woody encroachment, invasive species, water management, etc. Management experts will address these management topics. The workshop will conclude with a panel of the management presenters available for questions from the participants.



W-8 Teaching through Inquiry.....\$15.00

1 pm - 3 pm
Convention Center - Room 203B

Presenter: Gordon Uno, Department of Botany and Microbiology, University of Oklahoma, Norman, OK 73019-6131, guno@ou.edu

Target Audience: High School Teachers & Graduate Students/Undergraduate Faculty

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-5 Using Lucid Software for Making Interactive Keys.....\$140.00

8 am - 5 pm
University of South Alabama - LSCB 131

Presenters: Neil Snow and Jeffrey Brasher, Department of Biological Sciences, University of Northern Colorado Greeley, CO 80639, neil.snow@unco.edu; and

Geoff Norton, Centre for Pest Information and Technology Transfer, University of Queensland St. Lucia, QLD Australia

Target Audience: Undergraduate/Graduate

This workshop will provide in-depth coverage of Lucid software for writing and disseminating interactive keys. It will include instruction on the use of Lucid Builder, Lucid Player, key design and implementation, and discuss platform requirements and installation. Each participants will need to bring a pc laptop. Workshop participants will be able to purchase Lucid at a reduced rate.



Several companion/local tours of the Mobile area have been planned to enhance the conference program. Tour fees include transportation 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 Convention Center. 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 Bellingrath Gardens.....\$34.00

Sunday, July 27 - 1:00 pm to 4:00 pm

Enjoy a leisurely tour of one of America's most beautiful Homes & Gardens. We will stroll the acres of magnificent gardens and view the home, with its priceless silver, fine china, and one of the world's largest private collections of rare Boehm Porcelains.

Price includes: Transportation, admissions to garden and guide. Option: One hour House tour or Boat Ride are available and \$7 per person will be collected on the bus to the Gardens if you wish to attend.

LT-2 Mobile River Delta Cruise.....\$44.00

Monday, July 28 - 10:00am to 12:00 pm

You will cruise the Mobile River Delta. You will have the opportunity to learn of the diversity of the delta's ecosystem. Your captain will point out sighting of importance. You will see alligators relaxing out of harms way, many different wild flowers, and osprey.

Price includes: transportation, admissions, and guide.

LT-3 Alabama Lunch.....\$27.00

Monday, July 28 - 1:30 pm to 3:30 pm

Board your coach and depart for one of our popular seafood restaurants. Felix Fish Camp. Enjoy your choice of one of three entrees. The view of Mobile Bay is as delightful as the cuisine.

Price includes: Transportation and lunch.

LT-4 Walking Tour of Church Street.....\$10.00

Monday, July 28 - 2:00 pm to 4:00 pm

Walking tour of some of Church Street East Historic District that includes Fort Conde and Fort Conde Village... Bring sun hats. Water will be provided.

Price includes: water and your guide.

LT-5 Naval Aviation Museum.....\$42.00

Tuesday, July 29 - 9:00 am to 3:00 pm

Depart for the Naval Aviation Museum in Pensacola, Florida. Be sure you have a picture ID. Drivers license if fine. The Naval Aviation Museum displays a full-scale panoramic timeline of authentic aircraft and aviation memorabilia. This is the finest collection of historic Naval, Marine, and Coast Guard aircraft theme exhibits. Lunch will be at Mustin Beach Officers Club.

Price includes: transportation, admissions, guide, and lunch.

LT-6 Historic Mobile, Alabama & Mobile's Botanical Gardens.....\$32.00

Tuesday, July 29 - 1:00 pm - 5:00 pm

Tour one of the most beautiful and historic cities in the Southeast. Visit Mobile's Three Historic Districts with their diverse architecture

and beauty. We will also explore one of Mobile's premiere Ante Bellum Museum Homes featuring beautiful furnishings and interesting history. We will also visit Mobile's Botanical Gardens in Langham Park.

Price includes: Transportation, Admissions, and Guide.

LT-7 Mobile Botanical Garden.....\$20.00

Tuesday, July 29 - 9:00 am to 11:00 am

We will ride through the fashionable Springhill area and into Languam Park. We will drive by the new Mobile Museum of Art before we arrive at the Botanical Gardens. They will have a horticulturist give a tour of the Gardens. The Gardens have been nurtured by the Master Gardner's. Wear a sun hat. Water will be available.

Price includes: donation to the Garden, transportation, and guides.

LT-8 Dauphin Island, Alabama: Gulf Coast Estuarium/Ft. Gaines.....\$44.00

Wednesday, July 30 - 8:30 am - 2:30 pm

Board your coach for Dauphin Island, located at the mouth of Mobile Bay, and enjoy a morning of natural beauty and ecology. We will tour the Estuarium. Your guide will take you through the exhibit hall. The presentation includes the most important features of the Mobile Bay Ecosystem, beginning with Mobile-Tensaw River Delta, the Bay, the Gulf, and the Barrier Islands. You can stroll along the Gulf on the Nature Trail. Following we will also visit Ft. Gaines. This historic fort has seen tremendous historical battles that set the course for the United States, as we know it today. Lunch will be served at the Dauphin Island Sea Lab.

Price includes: Transportation, Admissions, Lunch, and Guide.

LT-9 Bellingrath Gardens.....\$34.00

Wednesday, July 30 - 9:00 am - 12:00 pm (repeat of LT1)

Enjoy a leisurely tour of one of America's most beautiful Homes & Gardens. We will stroll the acres of magnificent gardens and view the home, with its priceless silver, fine china, and one of the world's largest private collections of rare Boehm Porcelains.

Price includes: Transportation, admissions to garden and guide. Option: One hour House tour or Boat Ride are available and \$7 per person will be collected on the bus to the Gardens if you wish to attend.

LT-10 Shopping in Fairhope\$26.00

Wednesday, July 30 - 12:00 pm to 5:00 pm

Join us for an easy afternoon of shopping and browsing in one of the regions most picturesque bayside villages. There are numerous galleries, boutiques, and specialty stores for you to visit. There are also any number of restaurants and "treat shops" to sample. Price includes: transportation, and escort.

Please visit the outstanding array of scientific exhibits offered in the Great Ballroom of the Convention Center. The Exhibit Hall will be open Monday - Wednesday from 9:00 am - 5:00 pm.

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The Sullivant Moss Chapter of the Agassiz Association was founded in 1898, the same year that the first issue of *THE BRYOLOGIST* was published. The Society was founded by Elizabeth Britton, A. J. Grout and Willard N. Clute, and in the first year there were 34 members. In 1899 the Society had its first meeting and dissolved its association with the Agassiz Association. From the beginning years of the Society, not only mosses but also hepatics and lichens were of interest to the membership and the first articles on these latter two groups appeared in the 1901 volume of *THE BRYOLOGIST*. The Society and journal continued to grow and mature. During the middle part of the 20th century, William Campbell Steere, through his guiding efforts and his leadership of the young generation of bryologists, helped to move bryology into a more professional arena. In 1949 the Society changed its name to the American Bryological Society to reflect its position as a national society with international membership. In 1969 the membership voted to give the Society its current name to indicate the significant contributions of lichenology to the society. As the Society became more professional, *THE BRYOLOGIST* became more technical. Because identification of bryophytes and lichens frequently requires microscopic dissection and chemical analysis, the study of these organisms has often been primarily limited to professionals. In an effort to bring more amateurs into the Society, *EVANSIA* was initiated in 1984 to provide notes on techniques and local floristics. Today, the American Bryological and Lichenological Society has about 600 individual members from around the world and continues to promote all aspects of study on bryophytes and lichens. The URL for the ABLS website is <http://www.abls.org> and membership information can be found there. The URL for *THE BRYOLOGIST* is <http://www.unomaha.edu/~abls/bryologist.html>.

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The Linnaean Fern Chapter of the Agassiz Association was founded in 1892 by five people united by their mutual interest in fern study. ~~Published the quarterly~~ *Linnaean Fern Bulletin*, which contained original research, reports of field trips and floristic discoveries, and business and news. Because the Chapter was so small, it allowed W. N. Clute, its first president, to assume ownership of the Bulletin. By mid-1905, when a vote to adopt the name American Fern Society passed, 150 members were counted, few of them professional botanists. A member's library was begun to circulate fern books by mail. In 1910, the Society voted to establish and own the *American Fern Journal*, and the *Bulletin* ceased publication in 1912.

The Society grew fitfully through several decades and then rapidly due to the invigoration of botanical science after World War II. A fern spore exchange was established to provide amateur horticulturalists and botanical researchers with a wide variety of fern spores. By the 1970s, the *Journal* published mostly scientific papers, and so a newsletter, now called *Fiddlehead Forum*, was established to carry Society news, reports of field trips, and articles of interest to horticulturally and floristically inclined members. In 1979, a very occasional monograph series, *Pteridologia*, was begun. At present the Society has about 800 members, many of them botanists. The American Fern Society remains active in promoting all aspects of fern study, which was the intent of its five founders. Visit our home page on the World Wide Web at <http://www.amerfernsoc.org>

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The American Society of Plant Taxonomists promotes systematic botany through education, training, and public dissemination of original research on plants. Organized in 1935, the Society has a membership of about 1300. Information about dues schedules, activities of the Society, literature, publications, etc. is available at ASPT headquarters during the meeting or from the Treasurer at other times.

The Society publishes the journal *Systematic Botany*, a quarterly included with the membership dues. The Society also publishes *Systematic Botany Monographs*, at irregular intervals; standing or by-the-issue orders are available for this publication. Additionally a printed or electronic ASPT Newsletter is also included with Society membership dues. Abstracts of papers presented at the annual meeting are published with those of the Botanical Society of America and are mailed to members of the Botanical Society each July, preceding the annual meeting in August.

The ASPT also sponsors an annual competition for research grants for graduate student investigators. Support is available for students (both master's and doctoral levels) conducting fieldwork, herbarium travel, and/or laboratory research in any area of plant systematics.

The George R. Cooley Award is given for the outstanding contributed paper presented at the annual meeting. The 2002 winner was Nyree J. C. Zerega.

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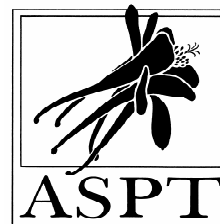
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The standing and *ad hoc* committees of the Society include: Nominations, Honors and Awards, Website, Environment and Public Policy, Publicity, and Systematic Collections. The publications of the Society each have an Editorial Committee. Reports on activities of the committees can be found in the *ASPT Newsletter*.

Information about current and upcoming issues of *Systematic Botany Monographs* is available at the address of the Editor.

For information on membership in ASPT, contact Ms. LINDA J. BROWN, Manager, ASPT Business Office, Department of Botany, University of Wyoming, Laramie, WY 82071-3165. Phone: (307) 766-2556, E-mail: aspt@uwyo.edu.



AMERICAN SOCIETY OF PLANT TAXONOMISTS

MEMBERSHIP APPLICATION



All persons interested in plant systematics, including modern and traditional methods and philosophies and all plant groups, are encouraged to support the American Society of Plant Taxonomists by joining the Society. Advantages of membership include: 1) affiliation with colleagues who share your interests; 2) subscription to *Systematic Botany*, the Society's journal; 3) eligibility to submit manuscripts to *Systematic Botany* with free page charges; and 4) the opportunity to present papers at the Society's annual meeting.

Annual dues for memberships in the Society, including a subscription to *Systematic Botany* are:

Regular Membership	\$43.00	(\$40.00)*
Family Membership	\$48.00	(\$45.00)*
Student	\$18.00	(\$15.00)*
Emeritus Membership	\$33.00	(\$30.00)*

*Pay this amount if paying by cash, check, or money order.

Name: _____

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Research Interests: _____

Amount Paid: _____ Check enclosed _____

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Card Number: _____ Expiration Date: _____

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**Faculty Co-Signature (to confirm Student status): _____

Send Application to: Ms. Linda Brown, ASPT Business Office, Department of Botany, University of Wyoming, Laramie, WY 82071-3165 . Fax: (307) 766-2851. E-mail: aspt@uwyo.edu

The original Botanical Society was organized in 1894. The present Botanical Society of America was founded in 1906 by the federation of the original Botanical Society of America, the Society of Plant Morphology and Physiology, and the American Mycological Society. The Botanical Society of America exists to promote botany, the field of basic science dealing with the study and inquiry into the form, function, diversity, reproduction, evolution, and uses of plants and their interactions within the biosphere. To accomplish this mission, the objectives of the Society are to: sustain and provide improved formal and informal education about plants; encourage basic plant research; provide expertise, direction, and position statements concerning plants and ecosystems; and foster communication within the professional botanical community, and between botanists and the rest of humankind through publications, meetings, and committees. The Society currently includes approximately 2,800 members from throughout the United States and abroad. Members are encouraged to present contributed papers and posters at the annual meeting in one or several disciplinary sections and to organize or otherwise participate in symposia, workshops and/or field trips. A variety of sectional and Society-wide awards, including Merit Awards, the highest career honor offered by the Society, are also presented at the annual meeting each year.

The Botanical Society of America publishes the *American Journal of Botany* monthly and the *Plant Science Bulletin* quarterly. The *American Journal of Botany* includes original research articles covering a broad range of botanical topics (<http://www.amjbot.org/>). Shorter articles of general interest, along with botanical news items and book reviews are published in the *Plant Science Bulletin* (<http://www.botany.org/bsa/psb/index.html>). Current and recent issues of both publications are fully accessible on the world wide web and more than 1,800 libraries from around the world subscribe to these periodicals. The *American Journal of Botany* is also available electronically from Volume 1, Number 1 at institutions which participate in the online scholarly journal archive, JSTOR (<http://www.jstor.org/>). In addition, the Botanical Society of America periodically releases special publications and reports.

More information about the Botanical Society of America's mission, annual conferences, publications, disciplinary and regional sections, awards, etc. is available on the Society's website at <http://www.botany.org/>.

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Abstracts

The abstracts of contributed papers, contributed posters, symposia presentations, the President-Elect's banquet address, and the plenary address for Botany 2003 were published on-line on the Botany 2003 web site (<http://www.2003.botanyconference.org/>) and in printed form in the Conference packet. Abstracts from members of other professional societies participating in the meeting are included within affiliated BSA Sections. Additional copies of the abstract volume are available for sale at the BSA table in the Exhibition Hall of the Convention Center, or from Johanne Stogran, BSA Meeting Manager (contact information provided above).

Field Trips & Workshops

Detailed descriptions of scientific field trips and workshops can be found in the Final Program.

Affiliated Societies

Three other professional societies are participating in Botany 2003 and these societies are meeting jointly with affiliated BSA Sections. These include: the American Fern Society (AFS) with the BSA Pteridological Section; American Society of Plant Taxonomists (ASPT) with the BSA Systematics Section, and the American Bryological and Lichenological Society (ABLS) with Bryological and Lichenological Section.

Banquet

The Annual Botanical Society of America Banquet will be at 7:00 pm on Wednesday, July 30. The Banquet will be preceded by a mixer at 6:00 pm.

Business Meeting

The Annual Business Meeting of the Botanical Society of America will be held on Tuesday, July 29 from 4:45 to 5:45 pm. All members are urged to attend and to become involved in the affairs of the Society.

Reception for New and Prospective Members

On Tuesday, July 29 from 6:00 to 7:00 pm, the Annual BSA Business Meeting will be followed by a Reception for all new and prospective members.

MEMBERSHIP APPLICATION

Membership includes 1-year electronic subscription to the *American Journal of Botany*, *Plant Science Bulletin*. Memberships and subscriptions are calendar year only (Jan. to Dec.). Approx. 50% of membership dues goes towards the cost of the AJB.

Date _____

*Name _____ Title _____
last first middle (Dr., Mrs., etc.)

*Family members: copy form, fill out separately, submit both copies together.

Mailing Address _____

Phone (____) _____ Zip Code _____ - _____

FAX (____)_____ e-mail: _____

Institutional affiliation:_____ (required if home address listed)

Area of interest: _____

Desired section affiliation(s)

<input type="checkbox"/> Bryology-Lichenology (L) add \$2	<input type="checkbox"/> Physiological (P) add \$2	<input type="checkbox"/> Systematics (S)
<input type="checkbox"/> Developmental-Structural (D) add \$2	<input type="checkbox"/> Phytochemical (C) add \$2	<input type="checkbox"/> Mycological (M)
<input type="checkbox"/> Ecological (E) add \$2	<input type="checkbox"/> Economic Botany (B)	<input type="checkbox"/> Teaching (T)
<input type="checkbox"/> Genetics (G) add \$4	<input type="checkbox"/> Pteridological (O)	<input type="checkbox"/> Northeastern (U)
<input type="checkbox"/> Paleobotanical (F) add \$8	<input type="checkbox"/> Historical (H)	<input type="checkbox"/> Mid-Continent (I)
<input type="checkbox"/> Phycological (A)	<input type="checkbox"/> Tropical Biology (J)	<input type="checkbox"/> Southeastern (V) add \$2
		<input type="checkbox"/> Pacific (W)

Annual Membership Dues

Student

Student (max. eligibility - 7 yrs-**must provide proof of student status!**) (S) - - - - \$30.00 _____

Student Family (max. eligibility - 7 yrs) (Y,X)	-----	-\$35.00
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Add Student AJB print subscription- - - - - \$35.00

Professional

Regular (M) - - - - - \$45.00

Regular Family (F,X) - - - - -	\$50.00
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Add Professional AJB print subscription- — - - - - \$55.00

LIFE

Life (1 payment) (L) ----- \$ 2000.00

K-12 TEACHERS - PLEASE PROVIDE AFFILIATION OR SCHOOL ADDRESS

K-12 Teachers (K) - - - - - \$30.00

Add K-12 AJB print subscription- - - - - \$35.00

Please indicate when membership is to start:

Totals:

____ January of current year

(Back issues of current volume of AJB will be sent)

_____ January of **next** year

Amount for Dues:

Amount for Sections:

Print subscription:

Total:

Payment must be a U.S. bank check or Postal Money Order in U.S. Dollars, payable to the Botanical Society of America or by MasterCard, Visa or American Express.

Charge my _____ MasterCard _____ Visa _____ AMEX Card# _____

Exp. date: _____

Name on Card (if different than above) _____

Signature: _____

*By submitting this individual membership form I agree **not** to re-sell or place the printed form of the Journal in a library or similar facility for at least three years.



www.botany.org

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Full Program At-A-Glance



Saturday, July 26

8:15 am - 9:15 am	Forum Sessions 1
1-1	Adam's Mark, Church
1-2	Adam's Mark, De Tonti
1-3	Adam's Mark, Dauphin
9:30 am - 10:30 am	Forum Sessions 2
2-1	Adam's Mark, Church
2-2	Adam's Mark, De Tonti
2-3	Adam's Mark, Dauphin
10:30 am - 11:00 am	Forum Break (Adam's Mark, Oakleigh)
11:00 am - 12:00 pm	Forum Keynote Address (Adam's Mark, Alabama Ballroom I-II)
<i>Dr. Bruce Alberts, President, National Academy of Sciences</i> <i>"Science Education and the National Science</i> <i>Education Standards: The challenges ahead"</i>	
12:00 pm - 1:30 pm	Lunch Break
1:30 pm - 2:30 pm	Forum Sessions 3
3-1	Adam's Mark, Church
3-2	Adam's Mark, De Tonti
3-3	Adam's Mark, Dauphin
2:45 pm - 3:45 pm	Forum Sessions 4
4-1	Adam's Mark, Church
4-2	Adam's Mark, De Tonti
3:45 pm - 4:15 pm	Forum Break (Adam's Mark, Oakleigh)
4:15 pm - 5:15 pm	Forum Sessions 5
5-1	Adam's Mark, Church
5-2	Adam's Mark, De Tonti
5-3	Adam's Mark, Dauphin
5:15 pm - 7:00 pm	Forum Reception (Adam's Mark, Mobile Ballroom)
7:00 pm - 10:00 pm	BSA Executive Committee Meeting (Adam's Mark Riverview Room)

Sunday, July 27

8:30 am - 4:00 pm	ASPT Council Meeting (Adam's Mark, Dauphin)
11:30 am - 1:00 pm	BSA New Committee Chair Meeting (Adam's Mark, Church)
1:00 pm - 5:00 pm	BSA Council Meeting (Adam's Mark, Dauphin)
3:00 pm - 6:30 pm	AFS Council Meeting (Adam's Mark, Magnolia)
5:00 pm - 6:30 pm	ABLS Executive Committee Meeting (Adam's Mark, De Tonti)
5:00 pm - 6:00 pm	Student Projectionists Meeting (MCC, 212)
5:00 pm - 6:00 pm	UMEB Undergraduate Student and Mentor Orientation Meeting (MCC, 203B)
7:30 pm - 8:30 pm	Plenary Lecture: Edward O. Wilson (MCC, 201A-D)
8:30 pm - 9:15 pm	Plenary Lecturer Book signing (MCC, Grand Ballroom-Pre-function)
8:30 pm - 10:00 pm	All-Society Mixer (MCC, Grand Ballroom- Pre-function)

Monday, July 28

Morning

7:00 am - 8:30 am	ABLS Breakfast (Ticketed Event) (Adam's Mark, Mobile Ballroom)	1:30 pm - 3:15 pm	Bryological and Lichenological Papers: Aaron J. Sharp Student Award presenta- tions (Session 11 - MCC, 201B)
8:10 am - 10:45 am	Plenary Symposium: Recent ad vances in restoration of aquatic and wetland habitats (Session 1 - MCC, 204A)	1:30 pm - 4:15 pm	Systematics Papers: Phylogeny Reconstruction Methods and Theory / Bioinformatics (Session 12 - MCC, 203A)
8:45 am - 10:00 am	Systematics Papers: Algae / Nonseed plants / Gymnosperms/ Paleoherbs (Session 2 - MCC, 203A)	1:30 pm - 4:30 pm	Systematics Papers: "Magnoliad Com- plex" and Caryophyllanae (Session 13 - MCC, 203B)
8:30 am - 12:00 pm	Systematics Papers: Monocots (Session 3 - MCC, 203B)	2:00 pm - 3:30 pm	Pteridological Papers (Session 14 - MCC, 201A)
9:00 am - 11:45 am	Pteridological Papers (Session 4 - MCC, 202A)	3:00 pm - 3:45 pm	Phytochemical Papers (Session 15 - MCC, 204B)
9:00 am - 11:30 am	Paleobotanical Papers: Isabel Cookson Student Award Papers (Session 5 - MCC, 202B)	3:45 pm - 4:15 pm	Phytochemical Section Business Meeting (MCC, 204B)
10:45 am - 11:30 am	Physiological Papers (Session 6 - MCC, 201A)	4:00 pm - 5:00 pm	Pteridological Section Business Meeting (MCC, 201A)
11:00 am - 12:00 pm	<i>Annals of Botany</i> Special Lecture: Paul Keddy (Session 7 - MCC, 204A)	Evening	
11:30 am - 12:00 pm	Physiological Section Business Meeting (MCC, 201A)		

Afternoon

12:00 pm - 1:30 pm	AFS Luncheon (Ticketed Event) (MCC, 201C)	5:00 pm - 6:00 pm	ASPT / Systematics Section, BSA Business Meeting (MCC, 203A)
12:00 pm - 1:00 pm	BSA Education Committee Meeting and Luncheon (MCC, 201D)	5:30 pm - 7:30 pm	Developmental and Structural Section, Mixer and Business Meeting (MCC, 202A)
1:00 pm - 5:00 pm	Symposium: Transgenic crops: Science, policy, politics (Session 8 - MCC, 204A)	6:00 pm - 7:00 pm	Paleobotanical Section Mixer (Roussos Restaurant)
1:00 pm - 4:45 pm	Developmental and Structural Papers: Reproductive structures (Session 9 - MCC, 202A)	7:00 pm - 10:00 pm	Paleobotanical Banquet (Ticketed Event) (Roussos Restaurant)
1:00 pm - 3:15 pm	Paleobotanical Papers: Isabel Cookson Student Award Papers and Tertiary and Late Cretaceous paleobotany (Session 10 - MCC, 202B)		

Tuesday, 29 July

Morning

7:00 am - 8:30 am Missouri Botanical Garden Breakfast
(Ticketed Event)(Adam's Mark, Blakeley I)

8:00 am - 12:00 pm Symposium: Methods and myths
about conducting research in botany
education (Session 16 - MCC, 204A)

8:30 am - 12:00 pm Ecological Papers: Plant ecology
(Session 17 - MCC, 204B)

8:30 am - 12:15 pm Systematics Papers: Lamiales
(Session 18 - MCC, 203A)

8:30 am - 12:00 pm Systematics Papers: Rosids:
Malpighiales to Rosales
(Session 19 - MCC, 203B)

9:00 am - 11:30 am Symposium: Sex and individuality in
lichens (Session 20 - MCC, 201B)

9:00 am - 11:30 am Developmental and Structural
Papers: Vegetative structures
(Session 21 - MCC, 202A)

9:00 am - 11:30 am Paleobotanical Papers: Mesozoic
paleobotany (Session 22 - MCC, 202B)

9:15 am - 10:45 am Tropical Biology Papers
(Session 23 - MCC, 201A)

10:45 am - 11:15 am Tropical Biology Section Business
Meeting (MCC, 201A)

11:30 am - 1:00 pm Economic Botany Luncheon
(Ticketed Event) (Adam's Mark, Blakeley)

11:30 am - 12:30 pm UMEB undergraduate student and
mentor Meeting and Luncheon
(MCC, 201C)

11:30 am - 12:30 pm BSA Membership Committee
Meeting and Luncheon (MCC, 201D)

Afternoon

12:30 pm - 2:00 pm Posters: All societies
(Session 24 - MCC, Grand Ballroom)

2:00 pm - 4:00 pm

Discussion Session: Maintaining support for herbaria and natural history collections in the 21st Century
(Session D-1 - MCC, 201A)

2:00 pm - 3:00 pm

Economic Botany Papers
(Session 25 - MCC, 202B)

2:00 pm - 4:30 pm

Colloquium: Biogeography of alpine plants on the large scale: Current stage and prospects (Session 26 - MCC, 201B)

2:00 pm - 5:00 pm

Systematics Papers: Cornales to Gentianales (Session 27 - MCC, 203B)

2:00 pm - 3:15 pm

Paleobotanical Papers:
Paleozoic paleobotany and informal presentations (Session 28 - MCC, 203A)

2:00 pm - 3:45 pm

Teaching Papers: Strategies for teaching and learning (Session 29 - MCC, 202A)

2:30 pm - 4:15 pm

Bryological and Lichenological Papers:
Bryophyte systematics
(Session 30 - MCC, 201D)

3:00 pm - 4:00 pm

Historical Papers
(Session 31 - MCC, 204B)

3:15 pm - 4:15 pm

Economic Botany Section Business Meeting (MCC, 202B)

3:15 pm - 4:15 pm

Paleobotanical Section Business Meeting (MCC, 203A)

3:45 pm - 4:45 pm

Teaching Section Business Meeting (MCC, 202A)

4:00 pm - 4:45 pm

Historical Section Business Meeting (MCC, 204B)

4:45 pm - 5:45 pm

BSA Business Meeting (MCC, 204A)

Evening

6:00 pm - 7:00 pm

BSA New and Prospective Member Social (MCC, 204A)

6:00 pm - 7:00 pm

ASPT Mixer (Exploreum)

7:00 pm - 10:00 pm

ASPT Banquet and Auction
(Ticketed Event) (Exploreum)

Wednesday, 30 July

Morning

7:00 am - 8:30 am	Miami University of Ohio Breakfast (Ticketed Event) (MCC, 201C)
8:00 am - 12:00 pm	Ecological Papers: Phenotypic plasticity, gene ecology, and reproductive ecology (Session 32 - MCC, 202A)
8:15 am - 11:45 am	Symposium: Dating in the 21st Century: Theory and reality in finding a date for your clade I-Theory and methods (Session 33 - MCC, 204B)
8:30 am - 12:00 pm	Systematics Papers: Apiales to Asterales (Session 34 - MCC, 202B)
9:00 am - 11:30 am	Symposium: Structural and functional adaptations of vascular plants to wetland ecosystems I (Session 35 - MCC, 204A)
9:00 am - 11:00 am	Bryological and Lichenological Papers: Lichenology, bryophyte ecology and physiology (Session 36 - MCC, 203A)
9:00 am - 11:45 am	Genetics Papers: Population and conservation genetics (Session 37 - MCC, 203B)
10:00 am - 11:00 am	Discussion Session: Show me the green! Federal funding and the botanical sciences (Session D-2 - MCC, 201D)
11:15 am - 12:15 pm	ABLS / Bryological and Lichenological Section, BSA Business Meeting (MCC, 203A)

Afternoon

12:00 pm - 1:00 pm	American Journal of Botany Editorial Board Meeting and Luncheon (MCC, 201D)
1:00 pm - 4:00 pm	Ecological Papers: Population and vegetation ecology (Session 38 - MCC, 202A)
1:00 pm - 3:15 pm	Systematics Papers: Fagales to Sapindales (Session 39 - MCC, 202B)
1:00 pm - 3:00 pm	Genetics Papers: Molecular genetics, molecular evolution and genomic analysis (Session 40 - MCC, 203B)

1:15 pm - 5:00 pm

Symposium: Dating in the 21st Century: Theory and reality in finding a date for your clade II-Case studies (Session **41** - MCC, 204B)

1:30 pm - 4:00 pm

Symposium: Structural and functional adaptations of vascular plants to wetland ecosystems II (Session **42** - MCC, 204A)

3:00 pm - 4:00 pm

Genetics Section Business Meeting (MCC, 203B)

3:30 pm - 4:30 pm

Discussion Session: How to become a professional botanist: Advice for students (Session **D-3** - MCC, 201D)

4:00 pm - 5:30 pm

Ecological Section Mixer and Business Meeting (MCC, 202A)

Evening

5:00 pm - 6:30 pm

ABLS / Bryological and Lichenological Section Mixer (MCC, 203A)

6:00 pm - 7:00 pm

BSA Mixer (Adam's Mark, 1st Floor, Pre-function)

7:00 pm - 10:00 pm

BSA Banquet (Ticketed Event) (Adam's Mark, Ballroom I-II)

Thursday, 31 July

8:00 am - 12:00 pm

BSA Executive Committee Meeting (Adam's Mark, Bay Point)

8:00 am - 12:00 pm

Deep Gene Research Coordination Network Meeting (Adam's Mark, Mobile I)

8:00 am - 12:00 pm

Deep Time Research Coordination Network Meeting (Adam's Mark, Mobile II)

New and Forthcoming from OXFORD



Linnæus' *Philosophia Botanica*

Translated by STEPHEN FREER

The eighteenth century Swedish botanist Carl von Linnæus, now commonly known as Linnaeus, was the initiator of the binary nomenclature now standard in biology. His *Philosophia Botanica* represents a key stage in the evolution of the scientific classification and ranking of plants, and is a classic in the history of science and botany. Amazingly, no complete translation into English has been undertaken since 1775.
2002 320 pp; 11 line illus.
\$25.00

The Pineapple

Botany, Production and Use

Edited by D. P. BARTHOLOMEW, R. E. PAULL, and K. G. ROHRBACH

This comprehensive reference book on the pineapple covers all topics from botany and taxonomy to genetics, breeding, production, disease, and postharvest techniques. There is currently no up-to-date volume on the pineapple, and this book fills that gap.
(CAB Publishing)
2003 328 pp; 42 color plates; 145 halftones and line arts.
\$20.00

Late Cretaceous and Cenozoic History of North American Vegetation

North of Mexico

ALAN GRAHAM

"The principal aim of the book, to explain the origin and development of North American plant formations, is clearly defined at the onset and remarkably well achieved considering the broad scope... This is a great book which will serve as an excellent guide for an advanced lecture course and as a practical guide to the knowledge of North America." —*Diversity and Distributions*
1999 370 pp; 1 color halftone, 826 b/w halftones & line arts.
\$35.00



Flora of North America

North of Mexico

Volume 23: Magnoliophyta: Commelinidae (in part): Cyperaceae

Edited by FLORA OF NORTH AMERICA EDITORIAL COMMITTEE

The first complete treatment of the floras of North America in more than half a century, this volume tackles the notoriously difficult to identify Cyperaceae with illustrations of all species in the group, emphasizing its great ecological importance. With extensive information on the more than 460 species of *Saxifraga*, this third volume out of the covering the flora of North America also includes 96 species of *Saxifraga*, 88 species of *Alchemilla*, 66 species of *Alchemilla*, and the monotypic North American endemic *Synedrella*.
2002 640 pp; 1 frontispiece, 8,520 images & line drawings.
\$25.00

Flora of North America

North of Mexico

Volume 26: Magnoliophyta: Liliidae: Liliales and Orchidales

Edited by FLORA OF NORTH AMERICA EDITORIAL COMMITTEE

The second of two volumes covering the monocots in North America north of Mexico, this volume features some of the most spectacular and showy native and naturalized species including orchids, lilies, irises, liliaceae, hyacinthaceae, diurnae, fescue, lupine, arthraxonaceae, agave, and yucca.
2002 752 pp; 112 line arts; 112 species distribution maps.
\$20.00

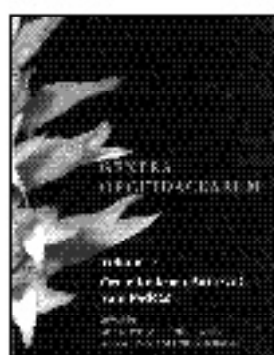
The Anatomy of the Monocotyledons

Volume IX: Acoraceae and Araceae

RICHARD C. KEATING

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SYMPOSIA, COLLOQUIA, ADDRESSES, & DISCUSSION SESSION AT-A-GLANCE



Sunday, July 27

7:30 pm - 8:30 pm Plenary Lecture: Edward O. Wilson
(MCC, 201A-D)

8:30 pm - 9:15 pm Plenary Lecturer Book signing (MCC,
Grand Ballroom Pre-function)

7:00 pm - 10:00 pm

Address of the ASPT President-Elect
(Lucinda Mcdade) - DNA and more: The in-
credible continuing contributions of her-
barium (and museum) specimens (at the
ASPT Banquet; Ticketed Event)

Monday, July 28

8:10 am - 10:45 am Plenary Symposium:
Recent advances in restoration of aquatic
and wetland habitats (Session 1 - MCC,
204A)

11:00 am - 12:00 pm *Annals of Botany* Special Lecture:
Paul Keddy (Session 7 - MCC, 204A)

11:30 am - 12:00 pm Physiological Section Business Meeting
(MCC, 201A)

1:00 pm - 5:00 pm Symposium: Transgenic crops: Science,
policy, politics (Session 8 - MCC, 204A)

Wednesday, July 30

8:15 am - 11:45 am

Symposium: Dating in the 21st Century:
Theory and reality in finding a date for your
clade, Part I - Theory and methods
(Session 33 - MCC, 204B)

9:00 am - 11:30 am

Symposium: Structural and functional ad-
aptations of vascular plants to wetland eco-
systems, Part I (Session 35 - MCC, 204A)

10:00 am - 11:00 am

Discussion Session: Show me the green!
Federal funding and the botanical sciences
(Session D-2 - MCC, 201D)

1:15 pm - 5:00 pm

Symposium: Dating in the 21st Century:
Theory and reality in finding a date for your
clade, Part II-Case studies (Session 41 -
MCC, 204B)

Tuesday, July 29

8:00 am - 12:00 pm Symposium: Methods and myths about
conducting research in botany education
(Session 16 - MCC, 204A)

9:00 am - 11:30 am Symposium: Sex and individuality in lichens
(Session 20 - MCC, 201B)

11:30 am - 1:00 pm Economic Botany Luncheon - Lecture: Dr.
Peter Bretting, "Shifting international norms
for scientific germplasm collection and for
recording traditional knowledge." (Ticketed
Event) (Adam's Mark, Blakeley Ballroom)

2:00 pm - 4:00 pm Discussion Session: Maintaining support for
herbaria and natural history collections in
the 21st Century (Session D-1 - MCC,
201A)

2:00 pm - 4:45 pm Colloquium: Biogeography of alpine plants
on the large scale: Current stage and pros-
pects (Session 26 - MCC, 201B)

1:30 pm - 4:15 pm

Symposium: Structural and functional ad-
aptations of vascular plants to wetland eco-
systems, Part II (Session 42 - MCC, 204A)

3:30 pm - 4:30 pm

Discussion Session: How to become a pro-
fessional botanist: Advice for students (Ses-
sion D-3 - MCC, 201D)

7:00 pm - 10:00 pm

Address of the BSA President-Elect (Linda
Graham) - The importance of organismal
biology as an essential link between mo-
lecular and systems biology (at the BSA
Banquet; Ticketed Event) (Adam's Mark,
Ballroom I-II)

AMERICAN BRYOLOGICAL AND LICHENOLOGICAL SOCIETY (ABLS)

Sunday, July 27

- | | |
|--------------------|---|
| 5:00 pm - 6:30 pm | ABLS Executive Committee Meeting
(Adam's Mark, Church) |
| 7:30 pm - 8:30 pm | Plenary Lecture: Edward O. Wilson
(MCC, 201A-D) |
| 8:30 pm - 9:15 pm | Plenary Lecturer Book signing
(MCC, Grand Ballroom-Pre-function) |
| 8:30 pm - 10:00 pm | All-Society Mixer (MCC, Grand Ballroom-
Pre-function) |

Monday, July 28

- | | |
|---------------------|---|
| 7:00 am - 8:30 am | ABLS Breakfast (Ticketed Event)
(Adam's Mark, Mobile Ballroom) |
| 8:10 am - 10:45am | Plenary Symposium: Recent advances
in restoration of aquatic and wetland
habitats (Session 1 - MCC, 204A) |
| 11:00 am - 12:00 pm | <i>Annals of Botany</i> Special Lecture:
Paul Keddy (Session 7 - MCC, 204A) |
| 1:30 pm - 3:15 pm | Papers: Aaron J. Sharp Student Award
presentations (Session 11 - MCC, 201B) |

Tuesday, July 29

- | | |
|--------------------|---|
| 9:00 am - 11:30 am | Symposium: Sex and individuality in
lichens (Session 20 - MCC, 201B) |
| 12:30 pm - 2:00 pm | Posters: All societies
(Session 24 - MCC, Grand Ballroom) |
| 2:00 pm - 4:00 pm | Discussion Session: Maintaining sup-
port for herbaria and natural history
collections in the 21st Century
(Session D-1 - MCC, 201A) |
| 2:30 pm - 4:15 pm | Papers: Bryophyte systematics
(Session 30 - MCC, 201D) |

Wednesday, July 30

- | | |
|---------------------|---|
| 9:00 am - 11:00 am | Papers: Lichenology, bryophyte ecology
and physiology (Session 36 - MCC, 203A) |
| 10:00 am - 11:00 am | Discussion Session: Show me the green!
Federal funding and the botanical sciences
(Session D-2 - MCC, 201D) |
| 11:15 am - 12:15 pm | ABLS / Bryological and Lichenological
Section, BSA Business Meeting
(MCC, 203A) |
| 3:30 pm - 4:30 pm | Discussion Session: How to become a
professional botanist: Advice for students
(Session D-3 - MCC, 201D) |
| 5:00 pm - 6:30 pm | ABLS / Bryological and Lichenological
Section Mixer (MCC, 203A) |

AMERICAN FERN SOCIETY (AFS)

Sunday, July 27

3:00 pm - 6:30 pm	AFS Council Meeting (Adam's Mark, Magnolia)
7:30 pm - 8:30 pm	Plenary Lecture: Edward O. Wilson (MCC, 201A-D)
8:30 pm - 9:15 pm	Plenary Lecturer Book signing (MCC, Grand Ballroom-Pre-function)
8:30 pm - 10:00 pm	All-Society Mixer (MCC, Grand Ballroom-Pre-function)

Monday, July 28

9:00 am - 11:45 am	Papers (Session 4 - MCC, 202A)
11:00 am - 12:00 pm	<i>Annals of Botany</i> Special Lecture: Paul Keddy (Session 7 - MCC, 204A)
12:00 pm - 1:30 pm	AFS Luncheon (Ticketed Event) (MCC, 201C)
2:00 pm - 3:30 pm	Papers (Session 14 - MCC, 201A)
4:00 pm - 5:00 pm	Pteridological Section Business Meeting (MCC, 201A)

Tuesday, July 29

12:30 pm - 2:00 pm	Posters: All societies (Session 24 - MCC, Grand Ballroom)
2:00 pm - 4:00 pm	Discussion Session: Maintaining support for herbaria and natural history collections in the 21st Century (Session D-1 - MCC, 201A)

Wednesday, July 30

10:00 am - 11:00 am	Discussion Session: Show me the green! Federal funding and the botanical sciences (Session D-2 - MCC, 201D)
3:30 pm - 4:30 pm	Discussion Session: How to become a professional botanist: Advice for students (Session D-3 - MCC, 201D)

AMERICAN SOCIETY OF PLANT TAXONOMISTS (ASPT)

Sunday, July 27

8:30 am - 4:00 pm	ASPT Council Meeting (Adam's Mark, Dauphin)	12:30 pm - 2:00 pm	Posters: All societies (Session 24 - MCC, Grand Ballroom)
7:30 pm - 8:30 pm	Plenary Lecture: Edward O. Wilson (MCC, 201A-D)	2:00 pm - 4:00 pm	Discussion Session: Maintaining support for herbaria and natural history collections in the 21st Century (Session D-1 - MCC, 201A)
8:30 pm - 9:15 pm	Plenary Lecturer Book signing (MCC, Grand Ballroom-Pre-function)	2:00 pm - 4:45 pm	Colloquium: Biogeography of alpine plants on the large scale: Current stage and prospects (Session 26 - MCC, 201B)
8:30 pm - 10:00 pm	All-Society Mixer (MCC, Grand Ballroom- Pre-function)	2:00 pm - 5:00 pm	Papers: Cornales to Gentianales (Session 27 - MCC, 203B)

Monday, July 28

8:10 am - 10:45 am	Plenary Symposium: Recent advances in restoration of aquatic and wetland habitats (Session 1 - MCC, 204A)	6:00 pm - 7:00 pm	ASPT Mixer (Exploreum)
8:45 am - 10:00 am	Papers: Algae / Nonseed plants / Gym- nosperms / Paleoherbs (Session 2 - MCC, 203A)	7:00 pm - 10:00 pm	ASPT Banquet and Auction (Ticketed Event) (Exploreum)

Wednesday, July 30

8:30 am - 12:00 pm	Papers: Monocots (Session 3 - MCC, 203B)	8:15 am - 11:45 am	Symposium: Dating in the 21st Century: Theory and reality in finding a date for your clade, Part I-Theory and methods (Session 33 - MCC, 204B)
11:00 am - 12:00 pm	<i>Annals of Botany</i> Special Lecture: Paul Keddy (Session 7 - MCC, 204A)	8:30 am - 12:00 pm	Papers: Apiales to Asterales (Session 34 - MCC, 202B)
1:00 pm - 5:00 pm	Symposium: Transgenic crops: Science, policy, politics (Session 8 - MCC, 204A)	10:00 am - 11:00 am	Discussion Session: Show me the green! Federal funding and the botanical sciences (Session D-2 - MCC, 201D)
1:30 pm - 4:15 pm	Papers: Phylogeny Reconstruction Methods and Theory / Bioinformatics (Session 12 - MCC, 203A)	1:00 pm - 3:15 pm	Papers: Fagales to Sapindales (Session 39 - MCC, 202B)
1:45 pm - 4:30 pm	Papers: "Magnoliad Complex" and Caryophyllanae (Session 13 - MCC, 203B)	1:15 pm - 5:00 pm	Symposium: Dating in the 21st Century: Theory and reality in finding a date for your clade, Part II-Case studies (Session 41 - MCC, 204B)
5:00 pm - 6:00 pm	ASPT / Systematics Section, BSA Business Meeting (MCC, 203A)	3:30 pm - 4:30 pm	Discussion Session: How to become a professional botanist: Advice for students (Session D-3 - MCC, 201D)

Tuesday, July 29

8:30 am - 12:15 pm	Papers: Lamiales (Session 18 - MCC, 203A)
8:30 am - 12:00 pm	Papers: Rosids: Malpighiales to Rosales (Session 19 - MCC, 203B)

BOTANICAL SOCIETY OF AMERICA (BSA)

BSA-WIDE

Saturday, July 26

7:00 pm - 10:00 pm BSA Executive Committee Meeting
(Adam's Mark, River Room)

12:30 pm - 2:00 pm Posters: All societies
(Session **24** - MCC, Grand Ballroom)

2:00 pm - 4:00 pm Discussion Session: Maintaining support for
herbaria and natural history collections in the
21st Century (Session **D-1** - MCC, 201A)

Sunday, July 27

11:30 am - 1:00 pm BSA New Committee Chair Meeting
(Adam's Mark, Church)

4:45 pm - 5:45 pm BSA Business Meeting (MCC, 204A)

6:00 pm - 7:00 pm BSA New and Prospective Member Social
(MCC, 204A)

1:00 pm - 5:00 pm BSA Council Meeting
(Adam's Mark, De Tonti)

Wednesday, July 30

5:00 pm - 6:00 pm UMEB Undergraduate Student and
Mentor Orientation Meeting (MCC, 203B)

10:00 am - 11:00 am Discussion Session: Show me the
green! Federal funding and the botanical
sciences (Session **D-2** - MCC, 201D)

7:30 pm - 8:30 pm Plenary Lecture: Edward O. Wilson
(MCC, 201A-D)

12:00 pm - 1:00 pm *American Journal of Botany* Editorial
Board Meeting and Luncheon (MCC, 201D)

8:30 pm - 9:15 pm Plenary Lecturer Book signing
(MCC, Grand Ballroom-Pre-function)

3:30 pm - 4:30 pm Discussion Session: How to become a
professional botanist: Advice for students
(Session **D-3** - MCC, 201D)

8:30 pm - 10:00 pm All-Society Mixer (MCC, Grand Ballroom-
Pre-function)

6:00 pm - 7:00 pm BSA Mixer (Adam's Mark, 1st Floor, Pre-
function)

Monday, July 28

8:10 am - 10:45 am Plenary Symposium: Recent advances
in restoration of aquatic and wetland
habitats (Session **1** - MCC, 204A)

7:00 pm - 10:00 pm BSA Banquet (Ticketed Event)
(Adam's Mark, Ballroom I-II)

11:00 am - 12:00 pm *Annals of Botany* Special Lecture:
Paul Keddy (Session **7** - MCC, 204A)

Thursday, July 31

12:00 pm - 1:00 pm BSA Education Committee Meeting and
Luncheon (MCC, 201D)

8:00 am - 12:00 pm BSA Executive Committee Meeting
(Adam's Mark, Bay Point)

Tuesday, July 29

11:30 am - 12:30 pm UMEB undergraduate student and men-
tor Meeting and Luncheon (MCC, 201C)

11:30 am - 12:30 pm BSA Membership Committee Meeting
and Luncheon (MCC, 201D)

BRYOLOGICAL AND LICHENOLOGICAL SECTION, BSA

See ASPT

DEVELOPMENTAL AND STRUCTURAL SECTION, BSA

Monday, July 28

- 1:00 pm - 4:45 pm Papers: Reproductive structures (Session 9 - MCC, 202A)
- 5:30 pm - 7:30 pm Mixer and Business Meeting (MCC, 202A)

Tuesday, July 29

- 9:00 am - 11:30 am Papers: Vegetative structures (Session 21 - MCC, 202A)
- 12:30 pm - 2:00 pm Posters: All societies (Session 24 - MCC, Grand Ballroom)

Wednesday, July 30

- 9:00 am - 11:30 am Symposium: Structural and functional adaptations of vascular plants to wet land ecosystems, Part I (Session 35 - MCC, 204A)
- 1:30 pm - 4:15 pm Symposium: Structural and functional adaptations of vascular plants to wetland ecosystems, Part II (Session 42 - MCC, 204A)

ECOLOGICAL SECTION, BSA

Monday, July 28

- 1:00 pm - 5:00 pm Symposium: Transgenic crops: Science, policy, politics (Session 8 - MCC, 204A)

Tuesday, July 29

- 8:30 am - 12:00 pm Papers: Plant ecology (Session 17 - MCC, 204B)
- 12:30 pm - 2:00 pm Posters: All societies (Session 24 - MCC, Grand Ballroom)

Wednesday, July 30

- 8:00 am - 12:00 pm Papers: Phenotypic plasticity, gene ecology, and reproductive ecology (Session 32 - MCC, 202A)
- 1:00 pm - 4:00 pm Papers: Population and vegetation ecology (Session 38 - MCC, 202A)
- 4:00 pm - 5:30 pm Mixer and Business Meeting (MCC, 202A)

ECONOMIC BOTANY SECTION, BSA

Monday, July 28

- 1:00 pm - 5:00 pm Symposium: Transgenic crops: Science, policy, politics (Session 8 - MCC, 204A)

Tuesday, July 29

- 11:30 am - 1:00 pm Economic Botany Luncheon (Ticketed Event) (Adam's Mark - Blakeley)
- 2:00 pm - 3:00 pm Papers (Session 25 - MCC, 202B)
- 12:30 pm - 2:00 pm Posters: All societies (Session 24 - MCC, Grand Ballroom)
- 3:15 pm - 4:15 pm Business Meeting (MCC, 202B)

GENETICS SECTION, BSA

Monday, July 28

- 1:00 pm - 5:00 pm Symposium: Transgenic crops: Science, policy, politics (Session 8 - MCC, 204A)

Tuesday, July 29

- 12:30 pm - 2:00 pm Posters: All societies (Session 24 - MCC, Grand Ballroom)

Wednesday, July 30

- 9:00 am - 11:45 am Papers: Population and conservation genetics (Session 37 - MCC, 203B)
- 1:00 pm - 3:00 pm Papers: Molecular genetics, molecular evolution and genomic analysis (Session 40 - MCC, 203B)
- 3:00 pm - 4:00 pm Business Meeting (MCC, 203B)

HISTORICAL SECTION, BSA

Tuesday, July 29

- 12:30 pm - 2:00 pm Posters: All societies (Session 24 - MCC, Grand Ballroom)
- 3:00 pm - 4:00 pm Papers (Session 31 - MCC, 204B)
- 4:00 pm - 4:45 pm Business Meeting (MCC, 204B)

PALEOBOTANICAL SECTION, BSA

Monday, July 28

- 9:00 am - 11:30 am Papers: Isabel Cookson Student Award Papers (Session 5 - MCC, 202B)
- 1:00 pm - 3:15 pm Papers: Isabel Cookson Student Award Papers and Tertiary and Late Cretaceous-paleobotany (Session 10 - MCC, 202B)
- 6:00 pm - 7:00 pm Mixer (Roussos Restaurant)
- 7:00 pm - 10:00 pm Banquet (Ticketed Event) (Roussos Restaurant)

Tuesday, July 29

- 9:00 am - 11:30 am Papers: Mesozoic paleobotany (Session 22 - MCC, 202B)
- 12:30 pm - 2:00 pm Posters: All societies (Session 24 - MCC, Grand Ballroom)
- 2:00 pm - 3:15 pm Papers: Paleozoic paleobotany and informal presentations (Session 28 - MCC, 203A)
- 3:15 pm - 4:15 pm Business Meeting (MCC, 203A)

Wednesday, July 30

- 8:15 am - 11:45 am Symposium: Dating in the 21st Century: Theory and reality in finding a date for your clade, Part I-Theory and methods (Session 33 - MCC, 204B)
- 1:15 pm - 5:00 pm Symposium: Dating in the 21st Century: Theory and reality in finding a date for your clade, Part II-Case studies (Session 41 - MCC, 204B)

PHYSIOLOGICAL SECTION, BSA

Monday, July 28

- 10:45 am - 11:30 am Papers (Session 6 - MCC, 201A)
- 11:30 am - 12:00 pm Business Meeting (MCC, 201A)
- 1:00 pm - 5:00 pm Symposium: Transgenic crops: Science, policy, politics (Session 8 - MCC, 204A)

Tuesday, July 29

- 12:30 pm - 2:00 pm Posters: All societies (Session 24 - MCC, Grand Ballroom)

PHYTOCHEMICAL SECTION, BSA

Monday, July 28

- 3:00 pm - 3:45 pm Papers (Session 15 - MCC, 204B)
- 3:45 pm - 4:15 pm Business Meeting (MCC, 204B)

Tuesday, July 29

- 12:30 pm - 2:00 pm Posters: All societies (Session 24 - MCC, Grand Ballroom)

PTERIDOLOGICAL SECTION, BSA

See AFS

SYSTEMATICS SECTION, BSA

See ASPT

TEACHING SECTION, BSA

Tuesday, July 29

- 8:00 am - 12:00 pm Symposium: Methods and myths about conducting research in botany education (Session 16 - MCC, 204A)
- 12:30 pm - 2:00 pm Posters: All societies (Session 24 - MCC, Grand Ballroom)
- 2:00 pm - 3:45 pm Papers: Strategies for teaching and learning (Session 29 - MCC, 202A)
- 3:45 pm - 4:45 pm Business Meeting (MCC, 202A)

TROPICAL BIOLOGY SECTION, BSA

Monday, July 28

- 1:00 pm - 5:00 pm Symposium: Transgenic crops: Science, policy, politics (Session 8 - MCC, 204A)

Tuesday, July 29

- 9:15 am - 10:45 am Papers (Session 23 - MCC, 201A)
- 10:45 am - 11:15 am Business Meeting (MCC, 201A)
- 12:30 pm - 2:00 pm Posters: All societies (Session 24 - MCC, Grand Ballroom)

Saturday, July 26

8:30 pm - 10:00 pm All-Society Mixer (MCC, Grand Ballroom-Pre-function)

Monday, July 28

7:00 am - 8:30 am ABLS Breakfast (Ticketed Event) (Adam's Mark, Mobile Ballroom)

12:00 pm - 1:30 pm AFS Luncheon (Ticketed Event) (MCC, 201C)

5:30 pm - 7:30 pm Developmental and Structural Section, Mixer and Business Meeting (MCC, 202A)

6:00 pm - 7:00 pm Paleobotanical Section Mixer (Roussos Restaurant)

7:00 pm - 10:00 pm Paleobotanical Banquet and Auction (Ticketed Event) (Roussos Restaurant)

Wednesday, July 30

7:00 am - 8:30 am Miami University of Ohio Breakfast (Ticketed Event) (MCC, 201C)

4:00 pm - 5:30 pm Ecological Section Mixer and Business Meeting (MCC, 202A)

5:00 pm - 6:30 pm ABLS / Bryological and Lichenological Section Mixer (MCC, 203A)

6:00 pm - 7:00 pm BSA Mixer (Adam's Mark, 1st Floor, Pre-function)

7:00 pm - 10:00 pm BSA Banquet (Ticketed Event) (Adam's Mark, Ballroom I-II)

Tuesday, July 29

7:00 am - 8:30 am Missouri Botanical Garden Breakfast (Ticketed Event) (Adam's Mark, Blakeley I)

11:30 am - 1:00 pm Economic Botany Luncheon (Ticketed Event) (Adam's Mark, Blakeley)

6:00 pm - 7:00 pm BSA New and Prospective Member Social (MCC, 204A)

6:00 pm - 7:00 pm ASPT Mixer (Exploreum)

7:00 pm - 10:00 pm ASPT Banquet and Auction (Ticketed Event) (Exploreum)

Saturday, July 26

7:00 pm – 10:00 pm BSA Executive Committee Meeting
(Adam's Mark, River Room)

Sunday, July 27

8:30 am – 4:00 pm ASPT Council Meeting (Adam's Mark, Dauphin)
11:30 am – 1:00 pm BSA New Committee Chair Meeting
(Adam's Mark, Church)
1:00 pm – 5:00 pm BSA Council Meeting (Adam's Mark, De Tonti)
3:00 pm – 6:30 pm AFS Council Meeting (Adam's Mark, Magnolia)
5:00 pm – 6:30 pm ABLS Executive Committee Meeting
(Adam's Mark, Church)
5:00 pm – 6:00 pm Student Projectionists Meeting (MCC, 212)
5:00 pm – 6:00 pm UMEB Undergraduate Student and Mentor Orientation Meeting (MCC, 203B)

Monday, July 28

11:30 am – 12:00 pm Physiological Section Business Meeting
(MCC, 201A)
12:00 pm – 1:00 pm BSA Education Committee Meeting and Luncheon (MCC, 201D)
3:45 pm – 4:15 pm Phytochemical Section Business Meeting
(MCC, 204B)
4:00 pm – 5:00 pm Pteridological Section Business Meeting
(MCC, 201A)
5:00 pm – 6:00 pm ASPT / Systematics Section, BSA Business Meeting (MCC, 203A)
5:30 pm – 7:30 pm Developmental and Structural Section, Mixer and Business Meeting (MCC, 202A)

Tuesday, July 29

10:45 am – 11:15 am Tropical Biology Section Business Meeting
(MCC, 201A)
11:30 am – 12:30 pm UMEB undergraduate student and mentor Meeting and Luncheon (MCC, 201C)
11:30 am – 12:30 pm BSA Membership Committee Meeting and Luncheon (MCC, 201D)
3:15 pm – 4:15 pm Economic Botany Section Business Meeting (MCC, 202B)
3:15 pm – 4:15 pm Paleobotanical Section Business Meeting (MCC, 203A)
3:45 pm – 4:45 pm Teaching Section Business Meeting (MCC, 202A)
4:00 pm – 4:45 pm Historical Section Business Meeting (MCC, 204B)
4:45 pm – 5:45 pm BSA Business Meeting (MCC, 204A)

Wednesday, July 30

12:00 pm – 1:00 pm *American Journal of Botany* Editorial Board Meeting and Luncheon (MCC, 201D)
3:00 pm – 4:00 pm Genetics Section Meeting (MCC 203B)
4:00 pm – 5:30 pm Ecological Section Mixer and Business Meeting (MCC, 202A)
5:00 pm – 6:30 pm ABLS / Bryological and Lichenological Section Mixer (MCC, 203A)

Thursday, July 31

8:00 am – 12:00 pm BSA Executive Committee Meeting (Adam's Mark, Bay Point)
8:00 am – 12:00 pm Deep Gene Research Coordination Network Meeting (Adam's Mark, Mobile I)
8:00 am – 12:00 pm Deep Time Research Coordination Network Meeting (Adam's Mark, Mobile II)

