

Plant Biology
Botany

2007

JOINT CONGRESS

**The Annual Meeting of Four
Professional Scientific Societies**

American Fern Society
American Society of Plant Biologists
American Society of Plant Taxonomists
Botanical Society of America

Registration Book

Botany & Plant Biology 2007 JOINT CONGRESS



American Fern Society

President: Tom A. Ranker, University of Colorado, tom.ranker@colorado.edu
Program Director: Warren D. Hauk, Denison University, hauk@denison.edu



American Society of Plant Biologists

President: Richard Amasino, University of Wisconsin,
Chair, Program Committee: Nicholas C. Carpita, Purdue University
Chair, Education Committee: Mary Williams, Harvey Mudd College
Executive Director: Crispin Taylor



American Society of Plant Taxonomists

President: Vicki Funk, Smithsonian Institution, funkv@si.edu
Program Director: Pat Herendeen, National Science Foundation, herenden@gwu.edu
Local Representative: Michael Dillon, The Field Museum, dillon@fieldmuseum.org



Botanical Society of America

President: Christopher H. Haufler, University of Kansas, vulgare@ku.edu
Program Director: Karen S. Renzaglia, Southern Illinois University, renzaglia@plant.siu.edu
Local Representative: Kayri Havens, Chicago Botanic Garden, khavens@chicagobotanic.org
Field Trip Coordinator: Timothy Bell, Chicago State University, tjbell22@csu.edu
Education Director: Claire Hemingway, chemingway@botany.org
Executive Director: William Dahl, wdahl@botany.org

Table of Contents

| | |
|---|----|
| Traveling To and Around Chicago..... | 3 |
| Conference Registration Rates | 3 |
| General Meeting Information | 4 |
| Audio-Visual Information | 6 |
| Specials for all Attendees | 6 |
| Especially for Teachers | 7 |
| The Education Forum | 8 |
| Poster Information..... | 8 |
| Joint Education Activities | 9 |
| The Forum Keynote Address | 10 |
| Scientific Meeting - Plenary Address | 11 |
| Symposia, Colloquia and Special Addresses | 12 |
| Educational and Scientific Workshops | 14 |
| Scientific Field Trips | 19 |
| Society and Association Ticketed Events | 25 |
| ASPB Travel Grant Information | 26 |
| Student Financial Opportunities..... | 27 |
| Student Volunteer Application | 29 |

Conference Overview

The schedule of this Joint Congress will consist of a blending of the scientific sessions and events traditional of the Botany series meetings and the Mini and Major Symposia format of the traditional meetings of the American Society of Plant Biologists. This sharing of science and research will be the first of its kind, and you the attendee can benefit.

An anticipated 2500 attendees will be able to participate in all the events scheduled and will present over 1800 scientific contributions including papers, posters, special lectures and symposia. A full slate of field trips, scientific workshops, and social events will round out the program. This is a unique opportunity for attendees to participate in events provided by the other plant societies as well as the normal Botany and Plant Biology format, it will encourage the sharing of plant science across many research areas.

Saturday, July 7, will feature the 6th Education and Outreach Forum. This successful component of the Botany conference is designed to draw educators and researchers involved in the teaching of biology and plant science from kindergarten through college. The day will include a range of engaging interactive sessions, a keynote lecture, and a concluding reception that will provide an opportunity for attendees to discuss and network in a social setting. Interested teachers will be able to apply for Illinois Continuing Professional Education Credits for participating in Forum activities.

Sunday, July 8, will be an active day of scientific workshops and field trips. Sunday evening will open the scientific meeting with the conference-wide Plenary Lecture, followed by an All-Society Mixer. Monday morning, July 9, kicks off the scientific sessions and symposia. Poster sessions will feature an expected 1000 posters featuring current research and recent topics. Scientific sessions will conclude on Wednesday, August 2. In addition, all participating societies will also hold social events and meetings throughout the week.

Why Chicago?

Top Ten Reasons to Visit Chicago

Come early and stay late - there is lots to see and do in Chicago!

1. Chicago architecture is magnificent—take a tour
2. Get the blues at Buddy Guy's Legends (one block from the Hilton)
3. Millennium Park has planted 80,000 flower bulbs from the International Flower Bulb Center. Experience summer concerts in Grant Park.
4. Millennium Park
5. The Field Museum
6. The Shedd Aquarium
7. Adler Planetarium
8. The Art Institute of Chicago
9. Experience a White Sox game (tentative schedule has home games July 2-8, 2007!)
10. Incredible diversity of restaurants in all price brackets as well as the world famous Taste of Chicago will take place June 29–July 8, 2007.

Source: Pat Herendeen, ASPT and former Chicago resident

Chicago Continues to Lead the Way in Making the City Green

New initiatives put forth by the city are making Chicago a frontier in cities going green. Under the direction of Mayor Richard M. Daley, Chicago has pledged to make Chicago the “greenest city in the US.”

City Hall boasts the largest rooftop garden, one of the most visible and recognizable structures in the city. The rooftop garden, named the City Hall Green Roof Pilot Project, is designed to provide education and research of weather patterns in the Midwest.

Mayor Daley has also spent many of his years in office overseeing the preservation of Chicago's 29 miles of shoreline, 15 miles of



beaches and 500 parks. He is also responsible for the planting of more than 400,000 trees throughout Chicago's neighborhoods.

Other initiatives driving Chicago's forefront include the placement of solar panels on a number of the city's buildings including the Field Museum, the Mexican Fine Arts Museum and the Art Institute; and free, natural gas-powered “trolley” fleets that transport tourists and conventioners around town.

Source: Chicago Convention and Tourism Bureau

Where to Stay

The Hilton Chicago is the conference hotel; most meeting events will take place within the hotel.

Hilton Chicago is a landmark downtown pet-friendly property located on the “Cultural Michigan Avenue Mile” overlooking Grant Park and Lake Michigan, Millennium Park and Museum Campus. It is the closest luxury hotel to the city's convention center, while being only minutes from the loop business center, shopping and theatre.

The Hilton Chicago hotel features 1,544 richly appointed guest rooms, full-service business center, fitness facilities, diverse dining options and over 234,000 square feet of meeting, banquet and exhibit space.

A free shuttle is available to guests of the Hilton Chicago hotel to go shopping on the Magnificent Mile and State Street.

Conference rates have been negotiated to be far below the traditional rates for this hotel and are:

| | |
|-------------|--------------------|
| Single room | \$149.00 per night |
| Double room | \$169.00 per night |
| Triple Room | \$189.00 per night |
| Quad Room | \$209.00 per night |

All rates are exclusive of state and local sales taxes.

These rates will be honored from now until May 31, 2007.

There are many hotels in the Chicago area to choose from . . . but all attendees are strongly encouraged to stay at the Hilton and to fill the room block. A full room block results in significant savings to the meeting.

Need Help with Sharing Expenses?

Roommate Matching:

The conference has contracted with a third-party Housing Bureau to help attendees share expenses. This service is available through the conference website. Download a Roommate Matching Form at:

http://www.2007.botanyconference.org/Chicago/2007_CongressRoommateForm.pdf

For questions: the Housing Bureau can be reached via phone, mail, fax or by e-mail.

E-mail: jointcongresshousing@conferencemanagers.com

Phone: (703) 964-1240

Fax: (703) 964-1246

Mail: Joint Congress 2007 Housing

11260 Roger Bacon Drive, Suite 402

Reston, VA 20190 USA

Traveling To and Around Chicago

The World's Air Crossroads

With two major international airports, O'Hare and Midway, Chicago offers more than 3,600 flights a day, making it the most accessible destination in the nation.

Those flights include direct nonstops to more international and national destinations than any city on the planet—46 international and 134 domestic business centers.

Chicago is a less than 4-hour flight from all major North American business destinations and less than 9 hours from European trade centers. The city offers daily nonstop direct flights to China, Japan and South Korea.

In addition, O'Hare International Airport has been voted the Best Airport in North America seven years running by the readers of *Business Traveler Magazine*.

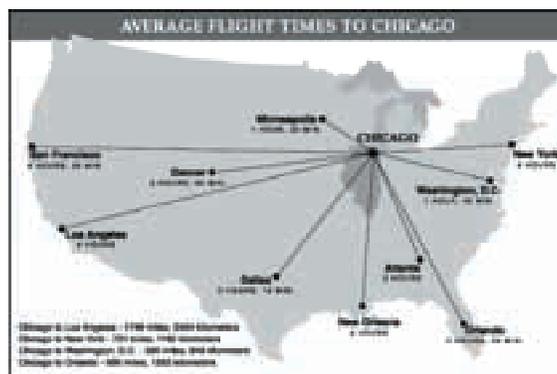
The Center of America

Chicago is at the center of the nation's interstate highway and rail systems, making it easily accessible from anywhere in the country.

About 12.9 million people live within an easy 2-hour drive of Chicago. Factor in those who live within a one-day drive, and you've got approximately 46 million people.

A number of major highways converge in Chicago, including:

- I-94 from Milwaukee into Indiana
- I-90 from central Wisconsin I-88 from the Quad Cities
- I-80 from Iowa to New York and beyond
- I-55 from St. Louis, Interstate 57 from southern Illinois and
- I-65 from Indiana



Drive Times from Select U.S. Cities

| City | Distance | Drive Time |
|-------------------|----------------|------------|
| Milwaukee..... | 91 miles..... | 1.5 hours |
| Indianapolis..... | 185 miles..... | 3.5 hours |
| Detroit | 275 miles..... | 4.5 hours |
| St. Louis..... | 291 miles..... | 5.0 hours |
| Cleveland | 346 miles..... | 5.5 hours |

Easy to Get Around

Chicago is a big city, but it's remarkably easy to get around. All the convention facilities, hotels, cultural institutions, shopping, dining and entertainment are concentrated in a relatively small area. Everything can be easily reached by walking, public transportation, or short cab rides. The city's rapid transit system provides quick, safe rail service to downtown from both O'Hare International and Midway airports. A free trolley offers shuttle service between Navy Pier and downtown destinations.

Conference Registration Rates

Unless otherwise noted, the following fees include the Educational Forum and Scientific Meeting, cover all events with the exception of ticketed events and field trips. Field trips and ticketed events will be priced individually. Scientific workshops are also included in your registration fee and are available on a first-come-first-served basis. (All fees must be paid in U.S. dollars)

Full instructions on how to register by mail, fax, or on-line are provided on the web at: www.aspb.org/2007registration

| | Early Bird <i>payment must be received no later than March 15</i> | Discounted <i>March 15-June 15</i> | On-site <i>After June 15 registrations only accepted at the meeting</i> |
|--|---|--|---|
| Member* | \$305.00 | \$355.00 | \$405.00 |
| Nonmember | \$475.00 | \$525.00 | \$575.00 |
| Post-doc Member* | \$245.00 | \$295.00 | \$345.00 |
| Post-doc Nonmember | \$365.00 | \$415.00 | \$465.00 |
| Graduate Student Member* | \$150.00 | \$200.00 | \$250.00 |
| Graduate Student Nonmember | \$245.00 | \$295.00 | \$345.00 |
| K-12 Educator | \$35.00 | \$60.00 | \$100.00 |
| Undergraduate Student | \$50.00 | \$100.00 | \$150.00 |
| ASPB & BSA Emeritus Member | FREE | FREE | FREE |
| One Day (Specify Day Mon-Wed Only) | \$125.00 | \$125.00 | \$125.00 |
| AFS Amateur Botanists** | \$20.00 | \$20.00 | \$20.00 |
| Partner & Spouse*** | \$65.00 | \$65.00 | \$65.00 |

(not to include accompanying students)

*Members of AFS, ASPB, ASPT, and BSA qualify for the Member rate.

** Includes eligibility for workshops, field trips, ticketed events and the All Society Mixer. NOTE: Does NOT include admission to scientific sessions, posters, or exhibit hall.

*** Includes admittance to Plenary Lecture, All-Society Mixer, Poster displays, and the Exhibition Hall. Includes eligibility for workshops, field trips, local tours and ticketed events. Includes invitation to Companion breakfast Monday, July 9th NOTE: Does NOT include admission to scientific sessions.

General Meeting Information

REGISTRATION

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

www.aspb.org/2007registration

A confirmation of your registration will be e-mailed within minutes of receipt. Tickets for events, a copy of the final program, book or CD of abstracts, and an official name badge will be included in your packet of registration materials available at the Registration Area at the conference.

PLEASE BRING YOUR REGISTRATION CONFIRMATION NOTICE WITH YOU TO THE CONFERENCE

This year's annual meeting will once again include a special educational Forum to be held in conjunction with the scientific meeting. The Forum will begin on Friday evening with early registration, and then continue on Saturday with a keynote lecture and a series of concurrent sessions. Saturday evening will conclude with a reception. Sunday continues with hands-on workshops presented as two-hour, half-day, or full-day events. Please see the Workshop section of this brochure for a full discussion of topics, leaders, logistics, special notes, and expected expenses for each workshop.

Scientific meeting registration fees cover four days of the meeting, including the Education Forum, the plenary lecture, All-Society Mixer, all Scientific Sessions, poster displays, and Exhibition Hall. An official name badge will be required for admission to all scientific sessions and the Exhibition Hall.

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

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

REGISTRATION PAYMENT

Checks, credit cards and wire transfers are the only acceptable forms of payment for pre-registration. For on-site registration, checks, credit cards and cash will be accepted.

FEDERAL TAX ID NUMBER

The Federal Tax ID number for the Botanical Society of America is 62-0671591. For American Society of Plant Biologists it is 53-0258999

COFFEE BREAKS

Complimentary coffee breaks will be held at specific times each day. Check the final program for times and locations.

REGISTRATION AREA HOURS

Conference Registration will be held inside the 8th Avenue entrance to the Hilton. Tentative hours are:

FridayJuly 6.....6:00 pm to 9:00 pm
Saturday.....July 77:00 am to 6:00 pm
Sunday.....July 8.....7:30 am to 7:00 pm
Monday.....July 9.....8:00 am to 6:00 pm
Tuesday.....July 10.....8:00 am to 6:00 pm
Wednesday July 118:00 am to 12:00 pm

SPECIAL SERVICES

If you require special accommodations, assistance, or services, please indicate so on the registration form and a Conference representative will contact you.

CHILD CARE ARRANGEMENTS

Child care can be arranged by directly calling the Hilton. Attendees are responsible for making all arrangements with the provider. The Conference 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.

SUBSIDIZED CHILD CARE

Sponsored by ASPB's Women in Plant Biology Committee, ASPB will provide up to a \$200 subsidy PER child, PER family for child care or babysitting services at Plant Biology & Botany 2007 for parents who would otherwise be unable to attend sessions and will not have a non-attending spouse present. Parents should make their own arrangements via their hotel concierge, then provide receipts to the conference registration desk at the meeting or by fax to 301-251-6740. No claims will be honored if received more than 60 days after the meeting closes. Reimbursements will be processed at ASPB headquarters immediately following the meeting. The Conference assumes no responsibility with respect to child care services and accepts no liabilities relative to the services. For reimbursement forms, email us at info@aspb.org, or pick up one at registration.

REFUND AND CANCELLATION POLICY

Requests for registration fee refunds will be honored if received in writing (email or fax) before June 15th. A 20% service fee will apply.

Fees for field trips, local tours, and social events are nonrefundable after June 15. Full refunds will be granted for social events, scientific field trips, local tours, and workshops if maximum enrollment is exceeded, if minimum enrollment is not met, or if the event is cancelled for any reason.

ALL-SOCIETY MIXER

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

General Meeting Information

FINAL PROGRAM AND ABSTRACTS

The final program and book of abstracts will be distributed with registration materials on-site at the registration desk. The program and abstracts will be searchable on the Conference website (www.2007.botanyconference.org and <http://www.aspb.org/meetings/pb-2007/>) prior to the conference. When registering, please indicate if you would like you a copy of the abstracts in the traditional book form or on searchable CD. Limited quantities of both media will be available on-site for purchase.

SOCIETY AND ASSOCIATION TICKETED EVENTS

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

INTERNET CAFE

Internet accessibility will be available in the Internet Cafe, which will be in the Exhibit Hall. The Internet Cafe will be in operation from 8:00 am to 6:00 pm on Sunday, July 8 through Wednesday, July 11. Times are subject to change.

EXHIBITS

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

| | |
|------------------|---|
| Sunday, July 8 | 8:30 pm – 10:00 pm..... All -Society Mixer |
| Monday, July 9 | 10:00 am – 2:00 pm 7:00 pm – 10:00 pm..... Hors d'oeuvres & Cash Bar |
| Tuesday, July 10 | 12:00 pm – 4:00 pm |

Be sure and check conference websites and the on-site Program Book for complete hours and schedule.

WORKSHOPS

Your full registration fee includes your choice of complimentary workshops scheduled for Saturday, July 7 and Sunday, July 8. Please bring your "registration confirmation notice" so that you have a record of your ticket. Please refer to the workshop descriptions in this brochure for full discussion of workshop topics, leaders, logistics, special notes, and expectations for each workshop.

FIELD TRIPS

A series of scientific field trips are scheduled before, during, and after the scientific program from Saturday, July 7 to Thursday, July 12. Field trips are ticketed events; tickets may be purchased during registration. If you participate in a field trip before you pick up your registration packet, please bring your "registration confirmation notice" so that you have a record of your purchased ticket. Please refer to the descriptions in Scientific Field Trips in this brochure for a full discussion of trip destinations, trip leaders, logistics, special notes, and expected expenses. A limited number of tickets may be available for purchase at the registration desk on-site at the meeting, but availability is not guaranteed.

STUDENT VOLUNTEERS

Students who work up to 10 hours as conference volunteers may have their early student registration fees refunded. Fee waivers are not granted. Student volunteers must register for the meeting and pay the registration fees.

Complete information regarding student volunteer positions and hours will be available on the conference websites: (www.2007.botanyconference.org and <http://www.aspb.org/meetings/pb-2007/>).

If you are interested in serving as a student volunteer, please fill out the application (see page 27), and submit it by June 15, 2007, to Plant Biology/Botany Conference, 2813 Blossom Avenue, Columbus, OH 43231; Fax: 614-895-7866 or email johanne@botany.org.

POSTERS AND POSTER SESSIONS

Posters will be on display for the duration of the meeting in the Exhibition Hall from 9:00 am to 5:00 pm Monday through Wednesday. Regular submission posters should be 4' tall and 4' wide. Recent topics posters should also be 4' tall and 4' wide. Materials may be secured with push pins, which will be provided.

Photographing, video taping, or recording of any kind IS PROHIBITED (including but not limited to camera phones and digital devices).

Poster set-up: Saturday, July, 8 from 9:00 am to 5:00 pm.

Poster take-down: Wednesday, July 11

Poster Sessions for all societies will be Monday and Tuesday evenings.

Neither the Hilton nor conference management are responsible for any poster materials remaining after 2:00 pm on Wednesday, July 11.

AUDIO-VISUAL INFORMATION

AUDIO-VISUAL INFORMATION

All contributed paper and symposium sessions will be held in the Hilton in a variety of meeting rooms. Audio amplification equipment will be provided in all rooms as needed. LCD projectors and laptop computers will be available as standard presentation options. Computers will support Microsoft PowerPoint2003 for presentations.

Macintosh and PC computers will be provided that support PowerPoint2003. Be sure and double check your presentation for accuracy before your scheduled time to prevent heartache! A speaker ready room will be available.

For computer presentations, files can be accepted on CD-ROM and memory stick. A centralized server for uploading presentations will be available.

For complete information, or specific technical questions regarding your presentation, please consult the conference websites (www.2007.botanyconference.org and <http://www.aspb.org/meetings/pb-2007/>).

Specials for all Attendees

Companion Breakfast

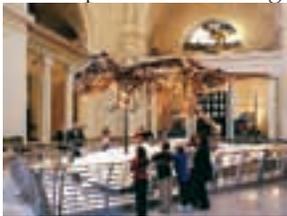
All registered companions—spouses, partners, significant others—are invited to join us for **breakfast on Monday, July 9 at 10:00 am**. Enjoy a Continental breakfast and learn about all the fun things to do in Chicago. Check the Final Program for location. Hosted by Mrs. Cecilia Horner & Mrs. Beverly Jansen and the Chicago Visitor and Convention Bureau.



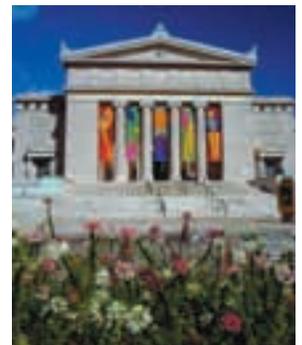
The Field Museum

The Field Museum has generously offered **FREE admission** to all conference attendees (with conference badge) for three days—Monday, July 9 –Wednesday, July 11.

The Field Museum's John G. Searle Herbarium has recently undergone a major space renovation with 15,000 sq. ft of new, compactor-sized storage, bringing the entire collection into a state-of-the-art, motorized facility. The renovation included the completion of a new Botany Library and Reading Room. The Botany Department's holdings also include extensive collections of fungi, lichens, mosses, liverworts, ferns, and the Economic Botany Collection dating from the World Columbian Exposition at Chicago's first World's Fair held in 1893.



Anyone wishing to visit the Field Museum's botanical collections during these dates should make advance arrangements with Christine Niezgodá, Economic Botany and Flowering Plant Collection Manager; Robert Lucking, Cryptogamic Collection Manager; or Matt von Konrat, Bryophyte Collection Manager, at the Field Museum,



Chicago Botanic Garden

Special arrangements have been made with the Chicago Botanic Garden to bring **sLowlife**, a traveling exhibit of live plants, time-lapse movies, and still images stimulating awareness of plants as living sensory organisms. This amazing exhibit was created by Roger Hangarter, Botany 2006 Forum Keynote speaker and past president of the American Society of Plant Biologists.

The exhibit will be at the Chicago Botanic Garden during Plant Biology-Botany 2007, and a special field trip has been included to highlight this exhibit. (See page 23...Field Trip 5)



Especially for Teachers

ATTEND THE EDUCATION FORUM

***Explore the diversity, beauty, and intriguing biology of plants
Increase your students' interest in science
Expand your professional growth***

We enthusiastically invite you to join us in learning and sharing novel ways to enhance science education and broaden participation in science by using plants.

As a model program for promoting innovations in science education, the Forum is a unique opportunity to collaborate with botanists and educators to improve botany teaching and learning. Each year, the Forum offers workshops, informational and discussion sessions geared to needs across educational levels.

Don't miss the hands-on FREE workshops, featuring "Plants in Space," "Smiling Faces: Simple Techniques for Teaching Enzyme Functions," "Classroom Wonders: Wisconsin Fast Plants and C-Fern," and much more. Sessions of note include an Active Learning short course and BioQUEST curricular resources. The scientific fieldtrips will highlight the rich botanical interests in the Chicago area.

This year's Keynote Address by Dr. Stephanie Pace Marshall, educator and the founding president of the Illinois Mathematics and Science Academy, promises to be enlightening and the reception lively. The weekend will conclude with a Plenary Lecture by Judge John Jones, the presiding judge in a decision determining that is unconstitutional to teach intelligent design within a public school science curriculum.

Stay tuned as more information comes available on the Botany meeting website: <http://www.2007.botanyconference.org/>. Be sure and register early for this dynamic weekend. K-12 Illinois educators attending the Forum will be eligible for Continuing Education Units.

Become involved in the new and exciting program. . .



planting science



Sponsored by the leaders in plant research

The Education Forum

As a model program for promoting innovation in science teaching, the Education and Outreach Forum has become an integral component of our annual meeting. Beginning at Botany 2002, Wisconsin meeting, the Forum has attracted hundreds of educators from around the country. With a variety of formats from discussions to workshops, the sessions provide a means for participants to explore novel approaches to integrating plants into the classroom and to reach out to broaden participation in science in general. The Forum is a must not only for teachers but also for researchers who are interested in making their results accessible to students of botany and biology at all levels.

The global significance of plants continues to grow. It is therefore vital that botanists and their professional societies work to ensure that plants are represented in the undergraduate and graduate curriculum, as well as in science outreach initiatives. Each year, the Forum has delighted attendees with informative sessions and a stellar key note address. Plant Biology/Botany 2007 will include the 6th Forum, which promises to be enlightening, engaging and lively.

The Forum begins on Saturday morning and includes informational sessions, interactive panel and roundtable discussions, and break-out groups. Attendees can also register to attend a series of FREE hands-on workshops or participate in scientific fieldtrips. The Forum keynote speaker is Dr. Stephanie Pace Marshall, founder of the Illinois Math and Science Academy. Saturday's events will conclude with a networking reception featuring a book signing by Dr. Marshall.

Sunday will feature more sessions, additional workshops and field trips and will dovetail with the scientific meeting where attendees can attend the Plenary Lecture, featuring Judge John Jones, who presided over a case involving intelligent design and public school science.

An additional feature of the 2007 Forum is the opportunity for Illinois teachers to receive up to 15 Continuing Professional Credits (CPEs) for attending the forum session, scientific workshops, field trips, and/or the scientific program.

Topical themes of the Forum emphasized through the discussion sessions

Emphasizing Botany Across the Curriculum
Developing Effective Teaching and Mentoring Skills
Supporting Effective Teaching and Learning

Active Learning in K-16 Classrooms

Designing Investigative Laboratories
Engaging Undergraduates in Research
Reaching Out Beyond the Ivory Towers

For complete information and details, including a listing of presenters, session titles, abstracts and much more, visit www.2007.botanyconference.org.

Poster Information

Location

All posters will be located in the Exhibit Halls. Find your final poster number by looking up your name in the author index in the back of the program. Posters will be numbered by category and also separated by formats or society.

Setup

Posters will be organized in rows by society or format, then category/session. Put your poster on the half side of the board below where your final poster number is located in the corresponding session category. The maximum size allocated for each poster is 4' x 4'. Be sure to use a type size and font that will be easily readable. Poster pins will be provided. Each side can hold two 4' x 4' posters. No electrical or multi-media displays. Do not move the boards or your poster number. If you did not submit your abstract for poster online before the closing of the online site, place your poster within the appropriate location in an un-numbered space.

Display Times

All posters will be displayed from Saturday evening through Wednesday afternoon. The hall will be closed at night for security reasons. Check the Final Program for exact times.

Attendance during the Exclusive Poster Session

Please attend your poster during the exclusive poster session times (TBD). Those with conflicts during the scheduled times may attach notes to their posters listing alternative times when they will attend their posters.

Photographing, video taping, or recording of any kind is PROHIBITED unless a poster author is present and provides specific permission.

Plant Biology Poster Categories

A complete list can be found on the conference website:
<http://www.aspb.org/meetings/pb-2007/>.

Joint Education Activities

Joint Education Activities at the Botany-Plant Biology Joint Congress

The education and outreach activities at this year's joint conference will be tremendous and diverse. In addition to our annual Education and Outreach Forum, several joint BSA and ASPB events are planned. All events are open to members of all societies.

Announcing several exciting opportunities for this conference

Joint Workshop

To facilitate a discussion of broader impacts, a Joint BSA-ASPB Education Workshop will focus on how to get from "**Ideas to Impact.**" Members who have developed and disseminated educational and broader outreach materials and representatives from funding agencies and professional societies will be available during this interactive session to discuss practical aspects of moving forward with your ideas.

The workshop will take place on Monday July 9, from 5:00 pm to 7:00 pm. Drinks and hors d'oeuvres will be available. There is no charge to attend, but pre-registration is required!



8th Annual ASPB Education Booth Exhibit Competition

The Education Committees of ASPB & BSA cordially invite you to share your activity with the Congress attendees by hosting an interactive exhibit or demonstration at the Education Booth at the meeting this summer in Chicago. Grants sponsored by ASPB are available to ASPB members, and BSA will sponsor one BSA member to showcase their education and outreach innovation in the Education Exhibit Competition. Have you developed new ways of carrying out hands-on science in your teaching laboratory or classroom? Have you developed effective outreach tools you'd like to share?

The **American Society of Plant Biologists Education Committee** is looking for new ideas and technology being used in the classroom or in outreach efforts, and, as an incentive, is offering a cash grant of \$500 and registration costs for up to three presenters. Your proposal should be no longer than four double-spaced pages. It should include a title and the address and contact information of the presenter(s). Guidelines for submission are listed at <http://www.aspb.org/meetings/pb-2007/educall.cfm>.

The **Botanical Society of America** will sponsor one BSA member to showcase their education or outreach innovation and join winners of the 8th Annual ASPB Education Booth Exhibitor Competition.

Registration fees will be waived for the winner of the BSA booth exhibitor competition. Awardees are expected to spend some time hosting their exhibit and interacting with members at the Education Booth. You're welcome to choose the times most convenient for you.

For consideration, please describe in three double-spaced pages or less: (1) the rationale behind the exhibit; highlight the use of new techniques, pedagogies, or technologies; (2) a clear, detailed summary of how the exhibit will function (a diagram or picture would be helpful) and how visitors can interact with the exhibit; (3) the equipment required, including computers, internet connection, etc. Submit your proposal as an email attachment to BSA Education Director Claire Hemingway (chemingway@botany.org) by March 21, 2007. The winner will be notified by April 16, 2007.

Joint Mixer

An informal opportunity for education committees of both societies to meet. Time TBA.

Special features at the 6th Annual BSA Education and Outreach Forum

Short course on Active Learning offered by Jim Wandersee and Marsh Sundberg on Saturday morning, July 7
Plant bioinformatics and simulations presented by BioQUEST Curriculum Consortium on Sunday, July 8

**Keep checking the conference websites for complete information about the
Education Forum
bringing together scientists and teachers
to make plant science exciting in the classroom!**

The Forum Keynote Address



Keynote Speaker
Stephanie Pace Marshall, Ph.D.
Title, Time & Location
to be Announced

Dr. Stephanie Pace Marshall is internationally recognized as a pioneer and innovative leader, teacher, speaker and writer on issues of leadership, learning and schooling, gifted and talented education, mathematics and science education, and the design of generative and life-affirming learning organizations. She is the founding President of the Illinois Mathematics and Science Academy.

Prior to becoming IMSA's founding President, Dr. Marshall served as the Superintendent of Schools in Batavia, Illinois, and worked as a national strategic planner. She has held numerous statewide leadership positions including President of the Illinois Association of Supervision and Curriculum Development, a member of the Governor's Science and Technology Advisory Committee, Chairman of the State Board of Education's Gifted Policy Advisory Committee, member of the Resource Committee of the Metropolitan Planning Council of Chicago, and a member of the National Commission for the Illinois Institute of Technology. She is currently a member of the President's Council of Northwestern University. She has taught at every educational level from elementary school through the doctoral level and has served as a member of the graduate faculty at National Louis University and Loyola University.

Dr. Marshall received a B.A. from Queens College in New York City, a Master's of Arts Degree in Curriculum Philosophy from the University of Chicago, and a Ph.D. in Educational Administration and Industrial Relations from Loyola University of Chicago. She holds three Honorary Doctorates from Illinois Wesleyan University, Aurora University, and North Central College.

In 1993, Dr. Marshall was elected President of the Association for Supervision and Curriculum Development International (ASCD), the largest educational leadership organization in the world (over 175,000 members). Dr. Marshall was a consultant to the U. S. Department of Education's Overseas Schools, and also to the Near East School Administrators. She continues to consult internationally and is currently working with the Government of South Australia on a major project called Learning to Learn.

Dr. Marshall was also instrumental in establishing the National Consortium for Specialized Secondary Schools of mathematics, science

and technology and was elected to serve as its founding President, a position she held for two years.

She served as an advisor to the Education Task Force of the President's Council of Science Advisors, as a member of the National Policy Council, the National Forum for Educational Organizational Leaders, and as a member of the National Academy of Sciences Committee on Advanced Study in Mathematics and Science in U.S. High Schools.

She is a contributor to the National Academy of Sciences book, *Learning and Understanding: Improving Advanced Study of Mathematics and Science in U. S. High Schools* (2002), and a chapter author for the book *Organizations for the Future*, published by the Drucker Foundation. She is also a chapter author for *Scientific Literacy for The 21st Century*. Dr. Marshall has published over 35 articles on educational innovation, educational leadership, gifted education, and mathematics and science reform. Her book, *The Power to Transform: Leadership that Brings Learning and Schooling to Life*, was published (Jossey-Bass Publishers) in February 2006.

Dr. Marshall has served as the Chairman of the Great Lakes District Selection Committee for the Rhodes Scholarship, and as a member of the Commissioning Committee of the USS Abraham Lincoln. At the invitation of Mikhail Gorbachev, she became a member of the State of The World Forum, an international "think-tank" designed to study and resolve issues impacting global sustainability. She has addressed the Forum on several occasions on issues of educational transformation. She is also a Fellow in the Royal Society for the Encouragement of Arts, Manufacturers, and Commerce in London, England. At the invitation of Queen Noor of Jordan, she joined the Board of Directors of the Queen Noor Jubilee School in Amman, Jordan (2002).

Dr. Marshall received Loyola University's Distinguished Alumni Award and was selected by the RJR Nabisco Corporation as one of the nation's most innovative educational leaders. She was selected twice by the Executive Educator Magazine and the National School Boards Association as one of North America's 100 Top School Executives and received a resolution from the Illinois General Assembly for Outstanding Contributions to Illinois Education.

The *Chicago Sun Times* selected her as one of the ten most powerful women in education and one of the 100 most powerful women in Chicago; she was elected into the inaugural Hall of Fame of Chicago Women's Today (2002) and has received numerous awards and recognitions for her distinctive leadership. These include: Distinguished Service Award from the United States Marine Corps, Woman Extraordinaire Award by the International Women's Association, Distinguished Citizen of the Year Award from the Boy Scouts of America, Van Miller Distinguished Scholar Practitioner Award from the University of Illinois, and Outstanding Women Leader of DuPage Award. In April, 2005, she was inducted into the Lincoln Academy of Illinois and received the Order of Lincoln, Illinois' highest award for achievement.

Dr. Marshall is a member of numerous corporate and civic groups in Chicago including the Economic Club, The Commercial Club, The Executives Club, and The Chicago Network. She is also a member of the Board of Directors of Tellabs, Inc., a member of the Board of Directors of Sentry Insurance, and is a Vice-President of The Fry Foundation in Chicago. She also serves as an international consultant, keynote speaker and writer on issues critical to educational transformation. At the invitation of President William Jefferson Clinton, Dr. Marshall became a member of the Clinton Global Initiative, a non-partisan cadre of "the world's most influential leaders committed to strengthening the capacity of people throughout the world to meet the challenges of global interdependence" in 2007.



**Dr. Marshall will hold a
Book Signing
during the
Forum Reception.
Check Program Book for
Time and Location**

Scientific Meeting - Plenary Address



Plenary Speaker
Judge John E. Jones III

Sunday, July 8, 7:30 pm

Title & Location to be Announced

In 2005 Judge Jones presided over the landmark case of *Kitzmiller v. Dover School District*, after which he held that it was unconstitutional to teach intelligent design within a public school science curriculum.

Judge John E. Jones III began his service as a United States District Judge on August 2, 2002. He is the 21st judge to sit in the Middle District of Pennsylvania. Judge Jones was appointed to his current position by President George W. Bush in February 2002 and was unanimously confirmed by the United States Senate on July 30, 2002.

Judge Jones was born and raised in Schuylkill County, which is part of the anthracite coal region of northeastern Pennsylvania. He is a graduate of the Mercersburg Academy, Dickinson College, and the Dickinson School of Law of The Pennsylvania State University.

In 1980 Judge Jones began his legal career as a law clerk to the President Judge of Schuylkill County, the Honorable Guy A. Bowe. Subsequently, Judge Jones joined the firm of Dolbin & Cori, and upon achieving the status of partner, the name of the firm was changed to Dolbin, Cori & Jones. In 1986, Judge Jones formed his own law firm, John Jones & Associates, where he continued to practice until this elevation to the federal bench. During a career as a trial lawyer, which spanned nearly twenty-two years, Judge Jones represented thousands of clients from all walks of life. He was an experienced litigator, practicing in state and federal tribunals across Pennsylvania. He served as solicitor

for several municipalities, including the city of Pottsville, Pennsylvania. Judge Jones also served as a part-time assistant public defender for Schuylkill County. For the last ten years of his practice, Judge Jones served as counsel to the Reading, Pennsylvania based law firm of Roland & Schlegel.

Prior to taking the bench, Judge Jones had numerous public and private affiliations. These included service as a member of the Board of Directors of the Union Bank and Trust Company of Pottsville, state attorney for the D.A.R.E. program (Drug Abuse Resistance Education), and chairman of a local foundation, which awarded scholarships to high school students based upon vocal music ability. He has served as an Assistant Scoutmaster and has been extensively involved with both the local and national Boy Scouts of America.

In November 1994, Pennsylvania Governor-elect Tom Ridge named Judge Jones as a co-chair of his transition team. Subsequently, in May 1995, Governor Ridge nominated Judge Jones to fill a vacancy on the Pennsylvania Liquor Control Board, which is the largest state liquor monopoly in the United States. After his unanimous confirmation by the Pennsylvania State Senate, Governor Ridge appointed Judge Jones Chairman of the Board. Judge Jones served as Chairman of the Pennsylvania Liquor Control Board for a total of seven years and two months, until he assumed his current duties. During his tenure on the Liquor Control Board, Judge Jones implemented substantial changes in liquor licensing procedures which were designed to both streamline and shorten the process. These included use of the internet to apply for and renew liquor licenses. He managed a workforce of over four thousand people, and administered a budget in excess of one billion dollars. Judge Jones also gained national attention in the area of alcohol education, with particular emphasis on underage drinking at college campuses, as well as drunk driving. In November 2000, Judge Jones' contributions were recognized when he received the Government Leadership Award from the National Commission Against Drunk Driving in Washington, D.C. At the time of his appointment to the bench, Judge Jones was a board member, and president elect, of the National Alcohol Beverage Control Association (NABCA).

Judge Jones has received the Distinguished Alumnus Award from the Dickinson School of Law, as well as an honorary doctorate in law and public policy from Dickinson College. In May 2006 Judge Jones was named by Time Magazine as one of its Time 100, the one hundred most influential people in the world. Judge Jones has also received a Rave Award for Policy from Wired Magazine. In 2006 Judge Jones was the recipient of the first John Marshall Judicial Independence Award, which will be presented annually by the Pennsylvania Bar Association. Judge Jones has presided over several noteworthy and high profile cases. In 2003 Judge Jones struck down portions of Shippensburg University's speech code on the basis that they violated the First Amendment's free speech guarantee. In that same year, Judge Jones ruled, in a decision later affirmed by the United States Supreme Court, that the U.S. Department of Agriculture's statute assessing milk producers in order to fund advertising, including the Milk Mustache/got milk® campaign did not infringe the free speech rights of the producers.

Judge Jones resides in his native Pottsville and has been married to his wife Beth Ann since 1982. They are the parents of daughter Meghan and son John.

Symposia, Colloquia and Special Addresses

Be sure and check conference websites and the Final Program for times and locations of these addresses.

Plenary Symposium

Organizer: Edward Schneider, Santa Barbara Botanic Garden

Pelton Award Lecture

Prof. Tobias Baskin, University of Massachusetts, Amherst

Address of the BSA President-Elect

Dr. Pamela Soltis, University of Florida, Gainesville

Annals of Botany Special Lecture

To be announced

ASPB Major Symposia

Plant Biology in Africa

Organizer: *Debby Delmer*, UC Davis
Additional Speakers to be announced

Manipulation of host signaling by pathogens

Organizers: *Barbara Kunkel*, Washington University
Shauna Somerville, Carnegie Institute
Eric L. Davis, North Carolina State University
Sheng Yang He, Michigan State University

Charles Albert Shull & Stephen Hales Prize Award Symposium

Xuemei Chen, University of California, Riverside
Ken Keegstra, Michigan State University

ASPB President's Symposium

Organizer: *Rick Amasino*, University of Wisconsin
Speakers: *Kirsten Bomblies*, Max Planck Institute for Developmental Biology - **When good genes behave badly - hybrid incompatibility in *Arabidopsis thaliana*.**
Kathy Barton, Carnegie Institution of Washington - **The role of HD-ZIPIII/LITTLE ZIPPER interactions in the establishment of leaf polarity.**
Jorge Dubcovsky, University of California - **The vernalization pathway in the temperate cereals.**
Harry Klee, University of Florida - **Control of ethylene-mediated developmental processes by receptor turnover.**

Plant Biology Minisymposium

Approximately 28 Minisymposia for the Plant Biology format will be created from reviews of submitted abstracts. Check www.aspb.org/pb-2007 for the announcement and scheduling of them.

Perspectives of Science Leaders

The awardee of the 2007 ASPB Leadership in Science Public Service Award will present. Speaker TBD

ASPB - BSA Joint Symposium Evolutionary Development

Organizer: *Michael Zanis*, Purdue University

Societal and Sectional Symposia

Plant-fungal interactions

Organizers: *Darlene Southworth*, Southern Oregon University
Suzanne Joneson Duke University
Sponsors: BSA Developmental and Structural, Economic Botany and Mycological Sections.

Deep Time: integrating paleobotany and phylogenetics

Organizers: *Douglas E. Soltis*, University of Florida
Patrick Herendeen, The George Washington University
Pamela S. Soltis, University of Florida
David L. Dilcher, University of Florida
Sponsors: ASPT and BSA Paleobotanical and Systematics Sections

A historical perspective on Chicago area botany

Organizers: *Lee B. Kass*, Cornell University
Sponsors: ASPT and BSA Historical, Developmental & Structural, and Systematic Sections

Evolution in a glaciated landscape: contribution of endemism to great lakes biodiversity

Organizers: *Anton A. Reznicek*, University of Michigan
Jess Peirson, University of Michigan
Sponsors: ASPT and BSA Ecological, Developmental & Structural, and Systematic Sections

Evolution of flower development: from phenotypes to genes

Organizers: *Verónica S. Di Stilio*, University of Washington
Sponsors: BSA Genetics and Developmental & Structural Sections

Borrowed chloroplasts: secondary endosymbiosis and the chromalveolates

Organizers: *Naomi Phillips*, Arcadia University
Ed Braun, University of Florida
Debashish Bhattacharya, University of Iowa
Sponsor: BSA Systematics Section

Frontiers in plant biology: emerging model species

Organizers: *Pamela Diggle*, University of Colorado
Elena Kramer, Harvard University
Sponsors: BSA Genetics and Developmental & Structural Sections

Symposia, Colloquia and Special Addresses

PlantingLearning: active learning in botany

Organizers: *Beverly J. Brown*, Nazareth College
Stokes Baker, University of Detroit Mercy
Sponsor: BSA Teaching Section

Plant phylogenomics: defining synergies between plant systematics and genome biology

Organizers: *J. Chris Pires*, University of Missouri
Jim Leebens-Mack, University of Georgia
Sponsor: ASPT and the BSA Genetics Section

Ranunculales - a basal eudicot perspective of angiosperm evolution

Organizers: *Stefan Gleissberg*, Ohio University
Sponsors: ASPT and BSA Developmental & Structural and Systematics Sections

The evolution and maintenance of mixed mating systems

Organizers: *Diane Byers*, Illinois State University
Johanne Brunet, University of Wisconsin - Madison
Sponsor: BSA Genetics Section

Molecules to morphology: Developing an understanding of plant evolution through time

Organizers: *Gar W. Rothwell*, Ohio University
Sarah Wyatt, Ohio University
Sponsor: BSA Paleobotanical Section

Comparative algal and bryophyte physiology

Organizers: *David Hanson*, University of New Mexico
Elizabeth R. Waters, San Diego State University
Sponsors: BSA Bryological and Lichenological, Phycological and Physiological Sections

Ferns on Oceanic Islands - from dispersal to long lasting diversity

Organizers: *Harald Schneider*, Universität Göttingen
Albrecht-von-Haller-Institut für Pflanzenwissenschaften
Tom A. Ranker, University of Colorado Museum
Sponsors: AFS and BSA Pteridological Section

Comparative genomics, development, physiology and systematics of the brassicaceae and cleomaceae

Organizers: *Jocelyn Hall*, University of Alberta
M. Eric Schranz, Duke University
Sponsors: ASPT and BSA Genetics Section

Plant photoreceptors and photomorphogenesis

Organizers: *Winslow Briggs*, Stanford University
Anitra Thorhaug, Yale University
Sponsor: BSA Physiological Section

The functional significance of leaf shape variation - towards a consensus from gene to community

Organizers: *Adrienne Nicotra*, Australian National University
Cynthia Jones, University of Connecticut
Dana Royer, Wesleyan University
Lawren Sack, University of Hawai'i
Sponsors: BSA Developmental & Structural, Ecological, Genetics, Paleobotanical and Physiological Sections

Conservation biology of eastern tallgrass prairie: integrating issues of management and restoration for the 21st century

Organizers: *Timothy Bell*, Chicago State University
Marlin Bowles, The Morton Arboretum
Sponsors: BSA Ecological Section

Using anatomy to vascularize tropical botany, ecology, and systematics: the contributions of Sherwin Carlquist to the botanical sciences

Organizers: *Witt Taylor*, Arizona State University
Selena Smith, University of Alberta
Sponsors: ASPT and BSA Developmental & Structural, Paleobotanical and Tropical Biology Sections

Paradigm shifts in systematic biology from Linnaeus to the present (1707-2007): Has anything really changed?

Organizers: *Tod Stuessy*, University of Vienna
Sponsors: ASPT and IAPT and the BSA Systematics Section

Colloquia

Integrating Plant Systematics

Organizers: *Mary Barkworth*, Intermountain Herbarium
Jack E. Murrell, Appalachian State University
Sponsors: ASPT and BSA Systematics Section

Integration of spatial and ecological data in evolutionary studies

Organizer: *Lena Struwe*, Rutgers University
Sponsors: ASPT and BSA Systematics Section

Evolution and diversification in the Sapindales

Organizers: *Susan K. Pell*, Brooklyn Botanic Garden
Allison Miller, Saint Louis University
Sponsor: BSA Genetics Section

Educational and Scientific Workshops

Your registration fee includes your choice of complimentary workshops scheduled for Saturday, July 8 and Sunday, July 9. Please bring your registration confirmation notice so that you have a record of your purchased ticket. Please refer to the workshop descriptions in this brochure for full discussion of workshop topics, leaders, logistics, special notes, and expectations for each workshop. Workshops are sponsored in part by the Botanical Society of America in conjunction with the workshop providers. There are a limited number of seats available. Register early!

Saturday

- 4-Hour AM W1 8:00 am - 12:00 pmNew BSA Teaching Innovations Short Course
2-Hour AM W2 10:00 am - 12:00 pm“Smiling Faces” —A Simple Technique for Teaching Enzyme Function
W3 10:00 am - 12:00 pmPlanting Science and Cultivating Mentoring
W4 10:00 am - 12:00 pmMorphBank’s New Annotation Functionality for Morphological Phylogenetics and Biological Research Collections
2-Hour PM W5 1:00 pm - 3:00 pmClassroom Wonders: Wisconsin Fast PlantsT and C-Fern
Evening (exact time to be announced)Career Workshops I & II

Sunday

- 4-Hour AM W6 8:30 am - 12:30 pmMeasuring Ecophysiological Processes in Plants from Cells to Ecosystems with Nondestructive Techniques
W7 8:30 am - 12:30 pmImage Quiz: Teaching plant identification based on insights from cognitive psychology
W8 8:30 am - 12:30 pmSharing scientific research with K-12 learners: expanding our outreach
2-Hour AM W9 10:00 am - 12:00 pmPlants in Space: Educational Opportunities in Plant Biology Using the Space Garden
W10 10:00 am - 12:00 pmPreparing Figure Files for Publication
4-Hour PM W11 1:00 pm - 5:00 pmScientific Writing and Editing
W12 1:00 pm - 3:00 pmCollections Planning and Policy for Educators and Academics
2-Hour PM W13 1:00 pm - 3:00 pmCarex Identification

Monday

- 2-Hour PM W14 5:00 pm - 7:00 pmJoint ASPB–BSA Education Workshop

Day and Time to be Announced..... Digital Art Workshops I & II: How to Prepare Print-Quality Digital Images

Saturday, July 7

W-1 New BSA Teaching Innovations Short Course

Saturday, July 7 8:00 am - 12:00 pm
Organized by: Jim Wandersee, Marshall Sundberg

This 4-hr short course is offered especially for prospective and new plant sciences faculty, and others, who seek an optimized overview of the latest thinking and research on successful college science teaching—including e-Learning. The short-course text book, *Active Learning in Secondary and College Science Classrooms*, will be supplied. Each course completer will receive an official ‘BSA 2007 Professional Update Course Completion Certificate.’

Attendee Limit: 50



W-2 “Smiling Faces”—A Simple Technique for Teaching Enzyme Function

Saturday, July 7 10:00 am - 12:00 pm
Organized by: Suzanne Cunningham, Purdue University, Agronomy Department, 915 West State Street, West Lafayette, IN 47907; Phone: 765-494-5825, Fax: 765-496-2926, scunning@purdue.edu

Interactive programs have been developed so students of various ages can experience plant science, learn how enzymes breakdown starch during digestion and seed germination and, ultimately, better understand the role agriculture plays in their daily lives. Plant science and starch digestion are introduced through hands-on experiments using corn seed, saliva, starch-agar gels, and iodine indicator. Elementary students learn what an enzyme is, how enzymes work using letters of the alphabet, and have the opportunity to see enzymes in action. We discuss the role enzymes play in seed germina-

Educational and Scientific Workshops

tion and food digestion. Simple hands-on experiments changing enzyme assay parameters can assist middle school students in charting enzyme activity. Students use the starch-agar gels containing seeds from grains and legumes to visualize the differences in the amount of starch stored in these seeds. Elementary and middle school students better understand the concepts of enzyme activity and specificity by using jigsaw puzzles and Lego™ blocks in 3- to 5-minute experiments. The food pyramid and the role plants play in nutrition are introduced to all students. Discussions of corn processing and utilization by the food, pharmaceutical, cosmetic, plastic, and oil industries help students appreciate the role agriculture plays in our culture.

Target Audience: Kindergarten–Middle School Teachers
Attendee Limit: 48

W-3 Planting Science and Cultivating Mentoring

Saturday, July 7 10:00 am - 12:00 pm
Organized by: Claire Hemingway, Botanical Society of America, P.O. Box 299 St. Louis, MO 63166; chemingway@botany.org

Did a mentor help pique and foster your interest in plant science? The PlantingScience program offers scientists from our sister societies meaningful opportunities to share their deep knowledge, curiosity, and excitement of scientific discovery, while helping students learn how science works and connects to everyday life. This interactive workshop will first present a brief introduction to the online mentoring PlantingScience program and then break into small discussion groups focused on the role of scientist mentors in science education. Join scientist mentors and K-16 educators in the program to explore and share strategies for effective mentoring. Using our experiences and student work in the program as a framework, we will address ways of promoting scientific habits of mind and guiding student investigations as well as some of the unique challenges of communicating online with young learners. This session is geared toward graduate students and post-doctoral researchers interested in building their mentoring skills, although it would be also of interest to faculty members looking for meaningful outreach programs to meet the National Science Foundation's Broader Impact statement.

Target Audience: Junior High School and High School Teachers, Undergraduate/Graduate
Attendee Limit: 50

W-4 MorphBank's New Annotation Functionality for Morphological Phylogenetics and Biological Research Collections

Saturday, July 7 10:00 am - 12:00 pm
Organized by: Austin Mast, Dept. of Biological Science, Florida State University, Tallahassee, FL, 32306; Phone: (850) 645-1500, Fax: (850) 644-9829, amast@bio.fsu.edu

Many biological disciplines draw important conclusions from images. However, many of these images cannot be published due to page constraints in journals, and thus they are not widely available. MorphBank (www.morphbank.com) is for these images what GenBank is for genetic data—an easily accessed repository with added functionality tailored to the disciplines using the resource. This workshop will introduce participants to new annotation functionality in MorphBank for phylogenetic character state annotations and the remote annotation of biological research collection specimens. Participants will be guided through the MorphBank interface, including the submission and annotation of images and the creation of access privileges for collaborations at early stages. This is a great opportunity for potential users to view and comment on the design of this emerging resource.

Target Audience: Undergraduate/Graduate
Attendee Limit: 20

W-5 Classroom Wonders: Wisconsin Fast Plants and C-Fern

Saturday, July 7 1:00 pm - 3:00 pm
Organized by: Kathy Fisher, Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215; Phone: 336-538-6272

Experience new, hands-on, minds-on activities with Wisconsin Fast Plants and C-Fern. These fascinating, diminutive, quick growing plants are ideal teaching tools for exploring life cycles, environmental effects, genetic variation, population biology and more while teaching students the process of doing science. Participants will do hands-on activities and receive free materials.

Target Audience: Junior High School and High School Teachers, Undergraduate/Graduate
Attendee Limit: 75

Educational and Scientific Workshops

Sunday, July 8

W-6 *Measuring Ecophysiological Responses of Plants from Cells to Ecosystems with Nondestructive Techniques*

Sunday, July 8 8:30 am - 12:30 pm

Organized by: Anitra Thorhaug, Yale University School of Forestry and Environmental Studies, 1359 SW 22 Terrace, Miami, FL 33145; Fax 305-858-6697, thorhaug@msn.com

Sponsored by the Physiological and the Ecological Sections of the Botanical Society of America. There has been a rapid development of in vivo imaging approaches to study physiological and ecological processes, especially responses to stress. These techniques range from the subcellular to the whole ecosystem and landscape levels. The techniques span a range from microscopy and NMR imaging to hand-held instruments (absorbance, fluorescence, reflectance sensors) to airborne and satellite remote sensing. What are new laboratory and portable field techniques to nondestructively measure plants? How do they operate? What are their limits of measurement? What can they do for your research or teaching? A hands-on workshop with experts and their instruments to demonstrate a series of nondestructive, non-intrusive instruments will work with the participants in small groups to learn how these instruments operate and what results can be obtained from each. The range from photosynthesis and stress measurements to remote sensing of ecosystems will be conveyed. This is a learning experience for investigators and students, for ecophysiologicals, physiologists, ecologists, and those who teach field and laboratory plant science. I. Organ, cellular, and subcellular level responses in photosynthesis: photosynthesis and light responses, cellular localization of responses, in vivo stains in organelles, organs and whole plants. II. Measuring stress at the whole plant to canopy scale, spectral reflectance for forest leaves, spectral reflectance signature of dominant habitat organisms for remote sensing, with major natural variables, portable absorbance measurements, fluorescence measurements: cells and leaves. III. Satellite and aerial mapping of ecosystems and plant health remote sensing, mid-altitude color photography mapping.

Target Audience: Undergraduate/Graduate/Scientists
Attendee Limit: 75

W-7 *Image Quiz: Teaching Plant Identification Based on Insights from Cognitive Psychology*

Sunday, July 8 8:30 am - 12:30 pm

Organized by: Bruce Kirchoff, Department of Biology, University of North Carolina at Greensboro, Greensboro, NC 27402-6170; Phone: 336-334-4953, Fax: 336-334-4839, kirchoff@uncg.edu

Image Quiz is a cross-platform computer program designed to efficiently teach plant identification. It does this by helping users become visual experts in species recognition. Unlike novices, experts are able to quickly recognize patterns. This allows chess masters to recognize chess configurations, and botanists to identify species from a glimpse out the window of a moving vehicle. Image Quiz helps students rapidly achieve this mastery by adapting techniques from cognitive psychology to the task of species recognition. It is designed to promote holistic processing, the visual processing mode used by experts.

Target Audience: Undergraduate/Graduate
Attendee Limit: 25

W-8 *Sharing Scientific Research with K-12 Learners: Expanding Our Outreach*

Sunday, July 8 8:30 am - 12:30 pm

Organized by: Candace Lutzow-Felling, Director of Education, Blandy Experimental Farm, University of Virginia, 400 Blandy Farm Lane, Boyce, VA 22620; Phone: (540)837-1758 ext 230, Fax: (540)837-1523, cjl6b@virginia.edu

Many scientists have the desire to share their knowledge and passion for science with the K-12 community but are uncertain how to transmit the findings and the process of science at the K-12 level. This workshop will help prepare scientists to collaborate with teachers and effectively communicate with students in K-12 classrooms. Questions addressed will include: How can I use my scientific knowledge, understanding, and experience to contribute to K-12 science education? What types of activities might be involved? How much time do I need to commit? Where might I interact with K-12 teachers and students? The workshop will begin with a discussion of how to adapt scientific knowledge and research for learning at the K-12 levels. Scientists involved in this knowledge transfer will share some of their insights and experiences. Two teachers who have collaborated with scientists, either in classroom teaching or scientific research, will give their perspectives with a focus on how scientists can partner with K-12 teachers to provide stu-

Educational and Scientific Workshops

dents with hands-on science experiences. Examples of projects that have involved K-12 students and teachers in scientific research will also be described. The second half of the workshop will provide an opportunity to brainstorm ways in which participants can share their knowledge and/or research with the K-12 community. Participants will also engage in some hands-on, inquiry-based botanical activities to become familiar with this teaching and learning method. Ways to incorporate this technique in teaching any age will also be discussed.

Target Audience: Professional and student scientists
Attendee Limit: 30

W-9 Plants in Space: Educational Opportunities in Plant Biology Using the Space Garden

Sunday, July 8 10:00 am - 12:00 pm
Organized by: Marty Gustafson, Orbital Technologies Corp. 1212 Fourier Drive Madison, WI 53717; Phone: (608) 827-5000, Fax: (608) 827-5050, gustafsonm@orbitec.com

Space exploration has been a perennial area of wonder for children across the United States. Not only is the spaceflight environment itself interesting, but it also has important biological consequences for plant growth. In this workshop, we will discuss why plants are important to the long-term development of space and what challenges scientists and engineers face in growing plants in microgravity, on the moon, and on Mars. We will then introduce the Space Garden, an educational plant growth kit for ground-based studies of plant biology, which is an analogue of the Astro Garden, a plant growth kit that will be used to grow basil on STS-118 and the International Space Station. Finally, we will discuss how interested students might become the space farmers of the future. The workshop fee includes a Space Garden kit for each participant.

Target Audience: Kindergarten - Middle School Teachers, Junior High School and High School Teachers
Attendee Limit: 50

W-10 Preparing Figure Files for Publication

Sunday, July 8 10:00 am - 12:00 pm
Presented by: Jeff Monson, File Preparation Specialist, Allen Press (publisher of *American Journal of Botany*);
Organized by: Beth E. Hazen, Production Editor, *American Journal of Botany*, behazen@willowsend.net, bhazen@botany.org

Jeff Monson, supervisor of Allen Press's Art Department, will introduce participants to the basics of preparing figures for print publications using Photoshop and sample figures. Participants may bring their own laptops and Photoshop and submit questions in advance to Beth (behazen@willowsend.net) or bring questions and figure files to the workshop.

Target Audience: Undergraduate/Graduate/Scientists
Attendee Limit: 30

W-11 Scientific Writing and Editing

Sunday, July 8 1:00 pm - 5:00 pm
Organized by: Beth E. Hazen, Production Editor, *American Journal of Botany*; behazen@willowsend.net, bhazen@botany.org

Learn to:

- ♦ Correct common problems with grammar, punctuation, style, word usage, tables and figures
- ♦ Use commas correctly
- ♦ Recognize indicators that signal problems
- ♦ Write more concisely, eliminate unnecessary words
- ♦ Write complete, succinct captions for tables and figures

Beth Hazen has a Ph.D. in plant pathology and has been a science manuscript editor for 10+ years. She also specializes in editing for non-native English writers and teaches workshops for manuscript reviewers. She will discuss numerous problems with manuscripts, including titles, content, tables, and figures, from the perspective of a reviewer. Pertinent areas of grammar, punctuation, terminology and word usage, and style will be highlighted with examples from manuscripts. Participants will receive her reference handbook, *Scientific Writing and Editing for Plant Scientists*, which expands on workshop topics. Questions for coverage in the workshop may be e-mailed to her at behazen@willowsend.net until five days before the start of the meeting. Sample paragraphs for onsite editing may be sent until 2 weeks before the meeting.

Target Audience: Undergraduate/Graduate/Scientists
Attendee Limit: 30

Educational and Scientific Workshops

W-12 Collections Planning and Policy for Educators and Academics

Sunday, July 8 1:00 - 3:00 pm

Organized by: Matthew Cole, Director of Education
Green Bay Botanical Garden PO Box 12644 Green Bay
WI 54307-2644 Phone: (920) 491-3691, Fax: (920) 490-
9461, mcole@gbbg.org

In the world of museums, collections form the basis for displays, research and education. Herbaria, libraries and greenhouses are familiar collections to many botanists—even the living plants on school or university grounds can be a resource for teaching or research. But the institutional policies that underlie collections management lay outside many students' and educators' experience. Step behind the curtain to see how collections policy and planning can affect the diversity of plants being grown, the sharing of costs or resources, the educational viability of your collection, and the standards for record-keeping and research. Examples will be drawn mostly from the collections of living plants.

Target Audience: Junior High School and High School Teachers, Undergraduate/Graduate
Attendee Limit: 16

W-13 Carex Identification

Sunday, July 8 1:00 pm - 3:00 pm

Organized by: T. M. Jones, Department of Biology
Utah State University 5305 Old Main Hill Logan, Utah
84322-5305 Cell: (216)789-6841 Fax: 435-797-1575
TPolonski@adelphia.net, A. A. Reznicek Herbarium,
University of Michigan 3600 Varsity Drive Ann Arbor,
Michigan 48108-2287, Ph: 734-764-5544 Fax - 734-647-
5719 reznicek@umich.edu

Participants will be given the opportunity to develop skill in the identification of sedges through a combination of short presentations and use of paper and computer-based keys. They are encouraged to bring their own specimens for identification but for those unable to do so, specimens will be provided. The participants will also be asked to complete a questionnaire on the keys used.

Target Audience: Junior High School and High School Teachers, Undergraduate/Graduate
Attendee Limit: 30

Monday, July 9

W-14 Ideas to Deliverables - Designing and Disseminating Effective Educational Materials: A Joint ASPB-BSA Education Workshop

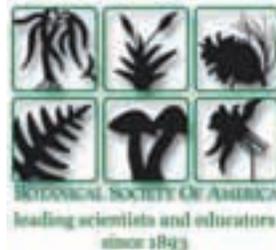
5:00 pm - 7:00 pm

Organized by Claire Hemingway, Education Director, Botanical Society of America and Mary Williams, Chair of the Education Committee, American Society of Plant Biologists

To facilitate a broader discussion of broader impacts, a Joint BSA-ASPB Education Workshop will focus on how to get from "Ideas to Impact." Members who have developed and disseminated educational and broader outreach materials and representatives from funding agencies and professional societies will be available during this interactive session to discuss practical aspects of moving forward with your ideas.

The workshop will take place on Monday July 9, from 5:00 pm to 7:00 pm. Drinks and hors d'oeuvres will be available. There is no charge to attend, but pre-registration is required!

Attendee Limit: 50



Digital Art Workshops I & II: How to Prepare Print-Quality Digital Images (Schedules TBD)

In this age of electronic content, the processes for submitting and publishing papers have never been faster or more convenient. However, constantly changing information, software, and file formats make the preparation of digital images evermore challenging. Digital Art I will be the beginner workshop & Digital Art II will be the advanced workshop. The workshops are complimentary for attendees. Speakers TBD - check conference websites for more information.

Scientific Field Trips

A full slate of field trips has been planned to showcase the botanical offerings of Chicago and the northern Illinois area. Field Trips are open to all registered attendees of Botany/Plant Biology 2007 including spouses and/or partners. All trips require pre-registration and are on a first-come first-served basis. Fees will include transportation, admission fees, field guides if provided, water, and where indicated, lunch. End times are approximate.

Saturday, July 7

| | | |
|------------------|---|----------|
| 8:00 am–5:00 pm | FT - 1 Ferns of the Indiana Dunes Region | \$85.00 |
| | FT - 2 Midewin National Tallgrass Prairie | \$115.00 |
| | FT - 3 Eastern Prairie Fringed Orchid Site Tour | \$130.00 |
| | FT - 4 The Indian Boundary Prairies | \$75.00 |
| | FT - 5 The Mazon Creek Fossil Flora | \$75.00 |
| 8:00 am–12:00 pm | FT - 6 Chicago Botanic Garden | \$35.00 |
| 10:00 am–2:00 pm | FT - 7 Illinois Beach State Park | \$50.00 |

Sunday, July 8

| | | |
|-----------------|---|----------|
| 8:00 am–5:00 pm | FT - 8 Ferns of Northeastern Illinois | \$75.00 |
| | FT - 9 FENS: More than “Peat with calcareous seepage...” | \$75.00 |
| | FT - 10 Warren Woods and Mud Lake Bog, Berrien County, Michigan | \$85.00 |
| | FT - 11 Somme Prairie and Vestal Grove..... | \$115.00 |
| | FT - 12 Calumet Wetlands | \$160.00 |
| | FT - 13 Flora and Ecology of the Indiana Dunes..... | \$85.00 |
| | FT - 14 The Morton Arboretum | \$85.00 |
| 1:00 pm–4:00 pm | FT - 15 The Field Museum and Botany Department | \$25.00 |
| | (to be repeated as FT 17) participants will walk to the museum | |

Thursday, July 12

| | | |
|------------------|--|---------|
| 8:00 am–5:00 pm | FT - 16 Dune Formations on Chicago’s Public Lakeshore: Monitoring and Management | \$85.00 |
| 9:00 am–12:00 pm | FT - 17 The Field Museum and Botany Department | \$25.00 |
| | (a repeat of FT 15) participants will walk to the museum | |

FT-1 Ferns of the Indiana Dunes Region

Saturday, July 7 8:00 am - 5:00 pm
 Trip Limit: 35
 Cost: \$85.00
 Box Lunch provided: Yes

Trip Leader: George Yatskievych
 Email Address: george.yatskievych@mobot.org

The Indiana Dunes, a picturesque region along the southern shore of Lake Michigan, encompasses a diverse series of habitats, including active sand dunes, black oak savannas, pine groves, upland deciduous forests, fens, bogs, marshes, and other wetlands. A number of ferns with northern affinities have outlying populations within this area, in addition to the characteristic midwestern woodland species. The area is also rich in flowering plants, which some participants may choose not to ignore. Our trip will include visits to several sites owned by the Indiana Dunes National Lakeshore, Indiana Dunes State Park, and private trusts such as the Shirley Heinze Land Trust.



Support requirements: Participants should come prepared for rainy weather or lots of sunshine. Lunch and drinks will be provided. Bug repellent will enhance your enjoyment of the foray. Walking will be moderate to easy, with some inclines in sand. Participants should also be prepared for some areas with wet soil. Most of the places we will visit and many of the plants we will see are considered of regional conservation concern; thus collecting of specimens will not be permitted.

FT - 2 Midewin National Tallgrass Prairie

Saturday, July 7 8:00 am - 5:00 pm
 Trip Limit: 20
 Cost: \$115.00
 Box Lunch provided: Yes

Trip Leader: Eric Ulaszek
 Email Address: ulaszek@fs.fed.us

Midewin National Tallgrass Prairie is the largest contiguous tract of public land in northeastern Illinois. Created from 19000 acres of the former Joliet Army Ammunition Plant, less than 5% of this



Scientific Field Trips

site is covered by native vegetation, but there is an ambitious project underway to restore the entire site to native prairie ecosystem, including large tracts of restored grassland landscapes. The field trip will include stops at and walks through several ongoing landscape-scale, high diversity habitat restorations of prairie, wetlands, and oak savanna. A portion of the trip will focus on the work behind these restorations, looking at equipment, native seed production and processing, native plant propagation, and invasive plant control. Stops will also feature remnant native plant communities, including the globally rare dolomite prairie, home to many range-restricted plants, including several species disjunct from ranges in the Ozarks and Nashville basin. Dolomite prairie also features different dominant grasses and characteristic forbs than typical tallgrass prairie, because of the combined effects of shallow soils, poor drainage, summer droughts, and chemical properties of the bedrock. Some of the locally rare plant species we will encounter in the dolomite prairie include *Eleocharis compressa*, *Carex crawei*, *Minuartia patula*, *Deschampsia cespitosa*, *Aster oblongifolius*, *Malvastrum hispidum*, *Satureja arkansana*, *Cyperus acuminatus*, and *Muhlenbergia cuspidata*. Exposed bedrock pavement in dolomite prairie pavements supports some regionally uncommon lichens, liverworts, and mosses. Midewin also supports significant populations of many grassland birds, and expect to see and hear bobolinks, dickcissels, grasshopper sparrows, and other species that are declining in or have disappeared from midwestern landscapes.

Not strenuous; no climbing involved. There will be some foot travel off trails in rank herbaceous vegetation or on saturated soils. Hats, sun screen, binoculars, hand lens, insect repellent, water, and shoes/boots with ankle support highly recommended.

FT-3 Eastern Prairie Fringe Orchid Site Tour

Saturday, July 7 8:00 am - 5:00 pm
Trip Limit:
Cost: \$75.00
Box Lunch provided: Yes

Trip Leader: Dr. Tim Bell
Email Address: tbell22@csu.edu



The field trip will involve a visit to at least one eastern prairie fringed orchid (*platanthera leucophaea*) site. The eastern prairie fringed orchid is a federally threatened plant. The field trip will include a brief description of the methods and goals for recovering the species and how volunteers and professionals are working together toward that goal. The trip will be mildly strenuous and may require some

bush whacking. Participants should wear waterproof boots or hip waders. Participants should also bring water, sun block, and insect repellent.

FT-4 The Indian Boundary Prairies

Saturday, July 7 8:00 am - 5:00 pm
Trip Limit: 25
Cost: \$75.00
Box Lunch provided: Yes

Trip Leader: Chris Mulvaney
Email address: cmulvaney@chicagowilderness.org

On this half-day field trip, we will tour the Indian Boundary Prairies (IBP) complex. Located on the bed of ancient Lake Chicago, the IBP offers a glimpse of what most of Chicago looked like 200 years ago. Despite its location within the bustling Chicagoland metropolis, the IBP complex ranks among the half dozen best examples of tall grass prairie east of the Mississippi River. Comprised of five sites totaling 427 acres, the IBP is considered to include the last high quality prairie remnants surviving within the Chicago Lake Plain. Because of its global importance, 150 acres within and adjacent to the Gensburg tract have been designated as a National Natural Landmark by the US Department of the Interior. IBP supports six plant communities: dry mesic prairie, mesic sand prairie, wet mesic prairie, wet prairie, sedge meadow and marsh. It also exhibits remarkable plant diversity, with over two hundred and sixty prairie plant species recorded.

Participants should bring water, insect repellent, hat and rugged footwear for hiking in the field

FT-5 Mazon Creek Fossil Flora

Saturday, July 7 8:00 am - 5:00 pm
Trip Limit: 25
Cost: \$75.00
Number of Leaders: 2
Box Lunch provided: Yes

Trip Leader: Ian Glasspool
Email Address: iglasspool@fieldmuseum.org

Visit the famous Pennsylvanian age Mazon Creek fossil lagerstätte. This day trip will stop first at the Mazon Creek River at Benson Farm to see the original site at which fossils were collected. From here the trip will continue to the Will County Coal Company Site (close to the Peabody Coal Company Pit 1 site) where there will be an opportunity to spend several hours collecting plant-bearing nodules from the Francis Creek Shale. Support requirements: Field Gear: Geological hammers

Scientific Field Trips

are essential as are safety glasses, also bring gloves and boots (Wellington boots are best), bags should also be bought to carry drinking water/packed lunch and any fossiliferous nodules. Moderate walking may be required dependent on the stream section and access conditions.

Trip is sponsored in part by the Paleobotanical Section of the Botanical Society of America.

FT-6 Chicago Botanic Garden

Saturday, July 7 - 8:00 am - 5:00 pm

Trip Limit: 150

Cost: \$35.00

Box Lunch provided: Yes

Trip Leader: Harriet Resnick - Chicago Botanic Garden
Email Address: hresnick@chicagobotanic.org

Located 25 miles north of downtown Chicago, the Chicago Botanic Garden offers 385 acres of beauty and serenity. It is a place where visitors can find waterfalls, native prairies and oak woodlands, English walled and rose gardens, water gardens, and exhibitions. It is the mission of the Chicago Botanic Garden to promote the enjoyment, understanding and conservation of plants and the natural world.



The Chicago Botanic Garden would like to offer attendees to Botany 2007 a chance to join us for a visit to include a tour of the sLowlife exhibit and remarks by its developer, Roger Hangarter.

sLowlife offers a journey into altered perceptions—a window into the world of plants. It accelerates the time-scale of plants into our own frame of reference, speeding up their everyday lives to a pace that resonates with our own.

Tour will include an introduction to sLowlife exhibit by Roger Hangarter and a tour of the exhibit. A Tram tour and a "Behind the Scenes" visit to greenhouses or you may enjoy the Garden on your own. Have Lunch at



Noon on McGinley Pavilion with more time to explore. Buses leave for Hilton around 3:30 p.m.

Visitors should dress for the weather and wear comfortable walking shoes. The field trip is not strenuous, participants can walk as much as they like.

FT-7 Illinois Beach State Park

Saturday, July 7, 10:00 am - 2:00 pm

Trip Limit: 20

Cost: \$50.00

Box Lunch provided: Yes

Trip Leader: Debra Nelson
Email Address: Debra.Nelson@Illinois.gov

At over 3000 acres, Illinois Beach State Park contains the largest single tract of undeveloped coastal habitat left in Illinois. It includes 6.5 miles of Lake Michigan shoreline and two dedicated Nature Preserves, Illinois Beach Nature Preserve (the State's first dedicated Nature Preserve), and North Dunes Nature Preserve. These preserves are natural areas of exceptional quality that support a diverse variety of plants and animals as a result of the site's unique coastal beach ridge and swale topography. Within the preserves are found 14 high quality natural communities, at least 31 state-listed endangered and threatened species, and habitat for 4 federally endangered species. We will view dune, interdunal wetland (panne), prairie, and black oak sand savanna communities. We will discuss on-going restoration efforts, Pitcher's Thistle reintroduction efforts, the lake's influence on the natural resources, and threats to the ecosystem due to invasive species and landscape changes.

Participants should be prepared for hiking and dress for the weather. It is often colder and windier along the lake so plan accordingly. The sensitivity of the area necessitates a group size not to exceed 20 individuals

FT-8 Ferns of Northeastern Illinois

Sunday, July 8 - 8:00 am - 5:00 pm

Trip Limit: 30

Cost: \$75.00

Box Lunch provided: Yes

Trip Leader: Carl Taylor
Email Address: wtaylor@nsf.gov

Due to public and private conservation efforts, a diversity of ferns and lycopods persists around the sprawling metropolis of Chicago. Throughout the day, we will visit some of the best places around Chicago to see ferns. One stop will be at Water Fall Glen Forest Preserve in southeastern DuPage County. Here, upland, bottomland and

Scientific Field Trips

swamp forests, marsh, sedge meadow, wet to dry prairies, ravines, and dolomite cliffs provide habitats that contain familiar favorites such as *Athyrium filix-femina*, *Botrychium virginianum*, *Cystopteris bulbifera*, and *Dryopteris carthusiana*, and others, not so common. Other possible stops include Braidwood Dunes and Savanna Nature Preserve, Sand Ridge Nature Preserve, Iroquois County Conservation Area, and Camp Sagawau. It is possible we will see the signature quillwort of northeastern Illinois, *Isoetes butleri*. Where, for only a few days about this time each year, its yellow, senescing leaves light up the prairie.

Participants should come prepared for sunshine or rain. Bug repellent might be needed. Walking is moderate to easy with possibly some wet spots. The areas visited are of conservation concern and collecting of specimens is not permitted.



FT-9 FENS: More than "Peat with calcareous seepage..."

Sunday, July 8 8:00 am - 5:00 pm

Trip Limit: 25

Cost: \$75.00

Box Lunch provided: Yes

Trip Leader: Steven Byers

Email Address: Steven.Byers@Illinois.gov

Fens: More than "Peat with calcareous seepage..." This description of fen wetlands, taken from the Illinois Natural Areas Inventory, fails to convey the unique assemblage of plants and animals that led the U.S. Army Corps of Engineers to describe fens as "...perhaps the most unique wetland community in the continental United States." Participants in this day-long tour of Trout Park Nature Preserve and Bluff Spring Fen Nature Preserve will witness two of the finest surviving fens in the entire Midwest. Both sites were recognized on the Illinois Natural Areas Inventory as extant, high-quality natural areas. Trout Park, because of its juxtaposition on ridges overlooking the east bank of the Fox River, supports a forested fen. Here, we will descend from an oak-dominated woodland into a groundwater discharge zone supporting great Angelica, skunk cabbage, and marsh marigolds. Nearby, black and blue ash and white cedar flourish along cold, groundwater-fed streams cascading down north-facing slopes. Less than 17 acres of forested fen survive in the State. Less than a half hour away is Bluff Spring Fen Nature Preserve. The hallmark of this 130+ acre mosaic of oak savannas, prairies, and wetlands are the graminoid fens and calcareous seeps.

Learn how the landscape favored the formation of these wetlands. Narrow trails lead through Ohio goldenrods, valerians, and flat-topped asters—species that define the graminoid fens. Volunteers and resource professionals will regale participants in successful restoration efforts, including the critical, early role of volunteers to preserve this site and their continued experimentation with tools (from loppers to bulldozers). Learn about the effects (if any?) of frequent burn rotations on habitat-restricted butterflies, reintroduction of the swamp metalmark, and long-term trends of the 12 state-listed species at this site. At this time of the year, you may meet the Baltimore checkerspot or chance upon a grass pink orchid. Finally, professionals will share efforts to identify and protect the groundwater resource upon which Bluff Spring Fen Nature Preserve is dependent and engage in "lessons learned." You will see, after touring these sites, that fens are indeed much, much more than "...peat with calcareous seepage."

The field trip will be in Elgin, IL so logistical concerns include either busing or training from Chicago to Elgin. With the round-trip travel, the trip will be all day. Participants should dress for weather (possibly hot or wet), arrangements should be made for lunch, with water or beverage break. Hiking shoes are a must.

FT-10 Warren Woods and Mud Lake Bog, Berrien County, Michigan

Sunday, July 8 8:00 am - 5:00 pm

Trip Limit: 20

Cost: \$85.00

Box Lunch provided: Yes

Trip Leader: Dennis W. Woodland

Email Address: E-mail: woody@andrews.edu

Within the glaciated region of the southern Lake Michigan area, two ecosystems are classic. In well-drained soil areas, the climax forest is the American Beech-Sugar Maple forest region, with Warren Woods State Park of Berrien County, mentioned by E. Lucy Braun in her *Deciduous Forests of Eastern North America* as "an excellent example of the mesophytic climax." A short drive east is a classic post-Pleistocene bog with the floating mat of ericaceous/sedge vegetation mat and a ring of stages of succession. The area is accessed via a floating boardwalk. Both locations are fine examples of people's attempt to preserve unique habitats for posterity. These two sites are visited each year by many students of ecology and give an excellent introduction to these ecosystems. The distinctive features and flora of each will be pointed out.

Scientific Field Trips

The sites provide a good field trip, traveling from Chicago and returning the same day. Warren Woods is a two hour drive from the loop and will take the morning. A box lunch will be provided. Mud Lake Bog is 20 minutes east and the excursion should finish there by 3:30 PM. The group should arrive back at their hotel between 4:30 and 5:00 PM (CDT). Relevant materials will be provided to all participants.

FT-11 Somme Prairie and Vestal Grove

Sunday, July 8 8:00 am - 5:00 pm
Trip Limit: 20
Cost: \$115.00
Box Lunch provided: Yes
Trip Leader: Stephen Packard
Email Address: spackard@audubon.org

High quality and restored prairie along with some of the region's oldest and most diverse savanna, oak woodland and ephemeral pond restorations. Somme Prairie, the most diverse in the region in one recent study, includes three acres of very high quality and 70 acres in various stages of recovery. Vestal Grove, Somme Prairie Grove and Somme Woods contain 200 acres of original and restored savanna and bur oak woodland. Twelve federal and state-listed plant species, including original and large restored populations.

Sturdy shoes and long pants are recommended.

FT - 12 Calumet Wetlands

Sunday, July 8 8:00 am - 5:00 pm
Trip Limit: 12
Cost: \$160.00
Box Lunch provided: Yes
Trip Leader: Laurel Ross
Email Address: lross@fieldmuseum.org

We will visit three sites of conservation interest in the Calumet region (southeast Chicago/suburbs): Powderhorn Marsh, Hegewisch Marsh, and Beaubien Woods to see wetlands communities in several stages of restoration. Participants would expect to see a range from rich and diverse to severely degraded. In addition to the plant communities we will see a variety of fungi, birds, herps and invertebrates and learn about the educational programs of Field Museum. A bus tour will give an overview of the unique landuse history that includes large industry and solid waste disposal facilities.



Binoculars, boots and hand lenses are recommended as well as insect repellent.

FT-13 Flora and Ecology of the Indiana Dunes

Sunday, July 8 8:00 am - 5:00 pm
Trip Limit: 30
Cost: \$85.00
Box Lunch provided: Yes
Trip Leader: Dr. Noel B. Pavlovic
Email Address: npavlovic@usgs.gov

To view a proportion of the floristic diversity of the Indiana Dunes the visitor is well advised to visit an temporal and physiognomic cross section of the dunes and wetlands. In the morning we will visit Miller Dunes to traverse a gradient from the beach to oak



savanna illustrating how the dynamic processes of dune formation, soil development, biotic interactions, and fire all play a role in succession. We will see foredunes, secondary dunes, pannes, ponds, jack pine stands, and oak savanna and woodlands. After lunch at park headquarters, we will proceed to Howes Prairie ecosystem to view oak savanna, mesic and wet prairie, and swamp forests to examine the impacts of fire on these systems. If time permits we will quickly visit late successional dune sites on the Calumet and Glenwood dunes before heading back to Chicago.

We will be walking on sandy soils so bring appropriate foot wear. Most walking will be on established trails, but we will ascend a few steep dune slopes at Miller Dunes. Mosquitos and ticks may be abundant. Bring water as it may be hot and muggy.

FT-14 The Morton Arboretum

Sunday, July 8 8:00 am - 5:00 pm
Trip Limit: 40
Cost: \$85.00
Box Lunch provided: Yes
Trip Leader: Kris Bachtell Director of Collections and Grounds
Email Address: kbachtel@mortonarb.org

Visit the Morton Arboretum's 1,700 acres of beautiful gardens, world-renowned plant collections, and rare and unique natural areas in an open-air tram. The Morton Arboretum includes nearly 4,000 taxa of woody plants, as well as 700 acres of natural areas comprising forest, savanna, prairie and wetlands, that serve as a living laboratory for restoration and management. The Sterling Morton Library holds over 25,000 volumes (including periodicals back to 1787), over 12,000 natural history artworks, nearly



Scientific Field Trips

5,000 rare natural history & landscape architecture books, nursery catalogs, over 1,500 landscape drawings by prairie school designers (Jensen, Johnson, Simonds), one of the best Midwestern botanical-horticultural libraries. Stops along the tour will include plant collections from more than 60 countries of north temperate regions of the world. The plants are labeled and grouped into collection themes, which helps in their interpretation and evaluation for their ability to survive the challenging climate of northern Illinois. Other stops will include the Schulenberg Prairie, one of the oldest planted prairies in Illinois, and a reconstruction of a dolomite prairie. The tour will also include the Morton Arboretum Herbarium that houses over 156,000 vascular plant specimens, including the most complete collection of dried plants documenting the rich and diverse flora of the Chicago region. Time will also be available to walk through other attractions such as the Children's Garden, Maze Garden, and the Sterling Morton Library.

This trip will include transportation throughout the arboretum in an open-air tram.

FT-15 The Field Museum and Botany Department

Sunday, July 8 1:00 pm - 4:00 pm

Trip Limit: 15

Cost: \$25.00

Trip Leader: Michael O. Dillon

Email Address: dillon@fieldmuseum.org

Tour of the Field Museum's Botany Department Herbarium, Economic Botany Collections, and Hall of Plants. The tour begins with a visit to the Department of Botany which manages 5th largest herbarium in the Western Hemisphere, estimated to include 2.7 million specimens of flowering plants, gymnosperms, ferns, bryophytes, fungi (including lichenized ascomycetes), and algae. The Herbarium was established in 1894 based on acquisitions from the World's Columbian Exposition of 1893. Over 100 years of botanical expeditions have established the Field Museum's herbarium as one of the world's preeminent depositories of neotropical plants. In early 2006, the Botany Department completed a major renovation which included the development of 14,000 sq ft of compactorized space containing new insect-and-moisture-proof cabinets that run electrically on rails. The herbarium provides collections (as loans) to researchers throughout the World's universities and botanical research institutes. In addition the tour will include the Museum's Economic Botany collections and the Hall of Plant Life containing hundreds of plant models, equally spectacular as Harvard's glass flowers. After the tour, participants will be free to view other attractions in the



Museum, such as the new Evolving Planet exhibit which covers evolution on the planet Earth. The tour will take 1.5 to 2 hours depending upon number of people.

Will be repeated as FT-17

FT-16 Dune Formations on Chicago's Public Lakeshore: Monitoring and Management

Thursday, July 12 8:00 am - 5:00 pm

Trip Limit: 19

Cost: \$85.00

Box Lunch provided: Yes

Trip Leader: Susanne Masi

Email Address: smasi@chicagobotanic.org

Portions of several Chicago public beaches are being allowed to develop into minor dune and swale/panne systems instead of being groomed for beach recreation. Native plant species have begun to colonize these areas, including several Illinois listed species. Five bird species nest in one dune site, and migrating birds include the federally listed Piping Plover. Montrose Beach, the most advanced dune system, has been designated an Illinois Natural Areas Inventory site. A U.S. Fish & Wildlife grant for Loyola Beach will help create Piping Plover habitat. At each site, volunteer stewards work with the Chicago Park District to monitor rare plants and manage the areas by controlling brush and invasive species. Vans will travel up Chicago's lakeshore to Montrose Beach, Osterman Beach and Loyola Beach, where we will have lunch. Stewards Leslie Borns, Pam Holy and Ann Whelan will meet us to tell the story of the ecology, plants and animals, management and relations with the public at their sites. A Chicago Park District representative will discuss the working relationship with the District. Trip leader will discuss the context of rare plant monitoring (Plants of Concern) in the Chicago Wilderness region. We will have an opportunity to explore the dunes and the plants. After lunch we will do some beach roaming before the final tour of Loyola Beach dunes.

Trip easy to moderate. Bring extra water, hat, sunscreen, shorts if you wish to wade. Box lunch included.

FT-17 The Field Museum and Botany Department A repeat of FT-15

Thursday, July 12 9:00 am - 12:00 pm

Trip Limit: 15

Cost: \$25.00

Trip Leader: Michael O. Dillon

Email Address: dillon@fieldmuseum.org

See description of Field Trip 15.

Society and Association Ticketed Events

Join your friends and colleagues at a variety of social events.

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

American Fern Society Luncheon

Monday, July 9 Noon - 1:30 pm - \$40.00

The AFS Luncheon will be followed by the annual business meeting. Come join us and hear about the many activities sponsored by the American Fern Society.

Paleobotanical Section Banquet

Monday, July 9 6:00 - 10:00 pm - \$40.00

Join your colleagues for dinner at Costa's Restaurant in Greentown. Bus transportation will be provided to the restaurant and back to the Hilton....Check your ticket for details.

Missouri Botanical Garden Breakfast

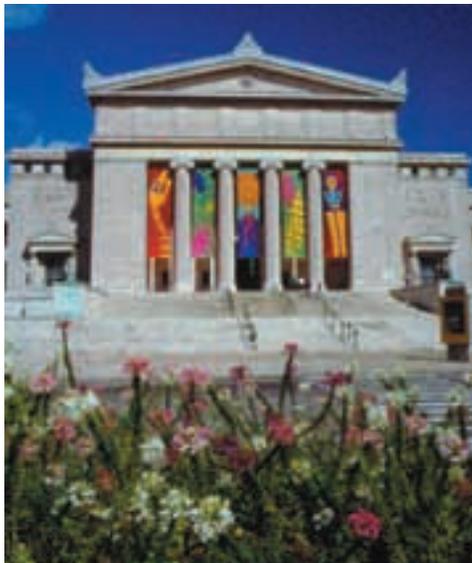
Tuesday, July 10 7:00 am - 8:30 am - \$25.00

All alumni, friends, and colleagues of the Missouri Botanical Garden are cordially invited to attend the annual MOBOT breakfast in Chicago. Catch up on activities at the Garden, meet old friends and make new ones, and enjoy a great breakfast before you start your meeting day.

Economic Botany Luncheon

Tuesday, July 10 11:30 am - 1:00 pm - \$40.00

Economic Botany Section members are encouraged to attend our annual luncheon – come hear the latest exciting news of the BSA initiative allowing students to discover core biological concepts through hands-on inquiry projects coupled with mentoring from plant scientists.



ASPT Banquet

Join us for a festive evening at one of Chicago's most desirable venues

Tuesday, July 10 6:00 - 10:00 pm

Students: \$35.00 All others: \$60.00

The ASPT Mixer and Banquet will be held in the Field Museum's Stanley Field Hall, one of the most elegant venues in the country for special catered events. The Field Museum is a short 15 minute walk through Grant Park from the conference site at the Hilton. Taxis will be available for those who need a ride. Take advantage of this great opportunity to renew friendships and make new acquaintances.



Tour the famous "Plants of the World" exhibit during the mixer. Our banquet will feature several important announcements, presentation of our major awards, and conclude with an address by President-Elect Paul Berry.

An extremely generous donation from the Field Museum has allowed us to establish a reduced ticket price for students (\$35), as well as an open bar for this event! Please encourage all graduate students to join us this year at our banquet dinner for a very special evening. You won't want to miss it!

The ASPB Final Party!

Tuesday, July 10 8:00 - 10:00pm - FREE

Come celebrate a successful meeting and dance the night away with the band *Brave Combo*. Have dinner on your own and join us for dessert and a drink.

Miami University of Ohio Breakfast

Wednesday, July 11 7:00 - 8:30 am - \$25.00

The Miami University Botany breakfast is open to any who have had some connection to the department, including students, alumni, faculty and staff, former faculty and staff, as well as friends. Join us, renew old friendships and catch up with what your colleagues have been doing!

Society and Association Ticketed Events

Botanical Society of America Mixer & Awards Reception

Wednesday, July 11 6:30 - 10:00 pm - \$25.00

Join the BSA to celebrate our accomplishments and to honor our most recent awardees. Join us at this informal reception and enjoy some of the things Chicago is famous for....Hotdogs and Pizza! All members of all societies are welcome!

Special Events

Undergraduate Networking Poster Session

Saturday July 7, 11:00 am - 12:30p pm

Undergraduate attendees are encouraged to attend and display their posters. Students will be free to mingle with each other, various Society leaders, and other meeting participants to share their research, network, and learn how to get the most out of the meeting. Students may take their posters to the main poster area marked for undergraduate posters after the event. This event is complimentary to attendees but pre-registration is required.

Career Workshops I & II

Saturday, July 7, 6:00 pm - 10:00 pm

One of the most popular events of previous Plant Biology meetings, these workshops provide insight from industry leaders on career topics. These workshops run concurrently and space is limited. A pre-purchased ticket is required, and both events include dinner. Topics & Speakers TBD - check conference web-sites for more information

Small Colleges/PUI Networking Breakfast

Sunday, July 8, 7:00 am - 8:30

This annual event serves as an opportunity to bring people from PUIs together to network, share information on strategies for teaching and research in plant biology, and explore other opportunities.



Minority Affairs Committee Sponsored Speaker and Luncheon

Sunday, July 8, 12:00 pm - 1:30 pm

This annual luncheon is sponsored by the ASPB Committee on Minority Affairs for meeting attendees. Speaker TBD

Women in Plant Biology Committee Sponsored Speaker and Luncheon

Monday, July 9, 12:00 pm - 1:30 pm

This annual luncheon is sponsored by the ASPB Women in Plant Biology Committee for meeting attendees. Speaker TBD

USDA Reception

Check Final Program for time and Place

All employees of the U.S. Department of Agriculture are invited to attend this annual reception. Enjoy the opportunity to share a beverage and mingle with this diverse group.

ASPB Travel Grant Program

ASPB has allotted \$35,000 to be given out in allotments of \$500 for the continuation of the Travel Grant Program. The goals of the program are to increase attendance of young scientists at the annual meeting by providing travel funds for those in financial need and to increase diversity among the annual meeting attendees. Undergraduate students are strongly encouraged to apply, as are graduate students, postdocs, and faculty beginning their careers in plant science.

All attendees from all societies are encouraged to apply. Visit <http://www.aspb.org/meetings/pb-2007/travelgrants.cfm> for complete information.



Student Financial Opportunities

Student participation in Plant Biology/Botany 2007 is necessary, appreciated, and supported. Several options exist to help students defray the cost of attending. Keep checking the conference website for updates as new opportunities become available and for complete information regarding each award.

All student members of all societies are eligible to apply for these awards.

Complete information about each these awards is available on the Botanical Society of America website... www.botany.org

Developmental & Structural Section Student Travel Awards

The Developmental and Structural Section of the Botanical Society of America is pleased to announce student travel awards available to undergraduate and graduate students who will attend the Botany 2007 Conference to be held in Chicago, Illinois, July 7–11. Although presentation of a paper or poster at Plant Biology/Botany 2007 is not a requirement, students who are presenting in a session sponsored by the Developmental and Structural Section will be given the highest priority. Applicants for this award must apply by April 1, 2007 using the form at www.botany.org.

Vernon I. Cheadle Awards

The Botanical Society of America, in conjunction with the Developmental & Structural Section, is pleased to open the call for applications for four \$500 Vernon I. Cheadle Student Travel Awards. Awards are available to undergraduate and graduate students who will present a paper or poster at the Plant Biology/Botany 2007 conference. Students who are presenting in a session sponsored by the Developmental & Structural Section will be given the highest priority. Applicants for this award must apply by April 1, 2007 using the form at www.botany.org.

Pteridological Section Student Travel Awards

The Pteridological Section of the Botanical Society of America is pleased to announce \$250 student travel awards available to undergraduate and graduate students who will attend Pteridological Section symposia and contributed paper sessions at the Plant Biology/Botany 2007 conference. Applicants for this award must apply by April 1, 2007 using the form at www.botany.org.

Conant Botanical Images Award

The Botanical Society of America is pleased to announce the Conant “Botanical Images” Student Travel Award (\$500) available to undergraduate and graduate students who are registered for and will attend the Plant Biology/Botany 2007 conference. The Award will be given for an outstanding botanical image. Although presentation of a paper/poster at the conference is not a requirement, students who are presenting will be given the highest priority. Images and associated metadata must be provided by April 1, 2007.



2006 First Place Winner
Jay F. Bolin
Old Dominion University

Phytochemical Section Student Travel Award

The Phytochemical Section of the Botanical Society of America is pleased to announce a \$400 student travel award available to undergraduate and graduate students presenting a paper or poster with phytochemical content at the Plant Biology/Botany 2007 conference. Applicants for this award must apply by April 1, 2007 using the form at www.botany.org.

Mycological Section Student Travel Award

The Mycological Section of the Botanical Society of America is pleased to announce a \$400 student travel award available to undergraduate and graduate students presenting a paper or poster with mycological content at the Plant Biology/Botany 2007 conference. Applicants for this award must apply by April 1, 2007 using the form at www.botany.org.

Phycological Section Student Travel Award

The Phycological Section of the Botanical Society of America is pleased to announce \$400 student travel awards available to undergraduate and graduate students who will attend the Plant Biology/Botany 2007 conference. Although the presentation of a paper or poster at Botany 2007 is not a requirement, students who are presenting in a session sponsored by the Phycological Section will be given the highest priority. Applicants for this award must apply by April 1, 2007 using the form at www.botany.org.

Ecological Section Student Travel Award

The Ecological Section of the Botanical Society of America is pleased to announce a \$400 student travel award in support of attendance at the Plant Biology/Botany 2007 conference. The award is available to undergraduate and graduate students presenting a paper or poster with ecological content. Applicants, please use the form online at www.botany.org to apply for this award by April 1, 2007.

Pteridological Section Student Travel Award

The Pteridological Section of the Botanical Society of America is pleased to announce a \$400 student travel award in support of attendance at the Botany 2007 conference. The award is available to undergraduate and graduate students presenting a paper or poster with pteridological content at the conference. Applicants, please use the form on the website www.botany.org to apply for this award by April 1, 2007. You will also need two letters of recommendation from faculty members who have knowledge of your academic performance, research experiences, and/or professional goals. Email the letters to bsa-manager@botany.org.

Student Volunteer Application

Apply to Serve as a Student Volunteer

If you are interested in serving as a student volunteer at the conference please fill out the application below and fax or mail your application as indicated below by June 15, 2007. A limited number of volunteer hours are available so be sure and submit your application early. We do not require student projectionists this year. In return for working 10 hours as a conference assistant you will be reimbursed your early student registration fee. (Up to \$150.00) Some Volunteer positions will be available beginning, Friday, July 6.

Volunteer positions may include but not limited to:

Session Monitors
Information and Directions
Registration Set-up

Greeters
Ticket Takers and Counters
Registration Tear-down

Interpreters
Registration Aides

If you are interested please submit your application, after the Conference Program is posted you will be contacted by email to determine your availability and your job preference.

Conditions

1. All potential volunteers must register for the meeting and pay the required registration fee.
2. Fee waivers will not be granted.
3. You must serve all your assigned hours to receive the registration refund.
4. You must submit your work form - signed by area supervisor to be reimbursed

Volunteer Application (please Print Clearly)

Name (First, Middle, Last) _____

Institution _____

Address _____

City _____ State _____ Zip Code _____ Country _____

Email _____ Daytime Phone _____

Society Membership (circle all that apply) AFS ASPB ASPT BSA

Send Completed form to:
Kathryn Stogran
Plant Biology/Botany 2007
2813 Blossom Avenue
Columbus, OH 43231
Ph: 614-899-9356
Fax: 614-895-7866
Email: Johanne@botany.org

I wish to apply for a volunteer position at the Plant Biology/
Botany 2007 Conference. I agree to abide by the conditions
listed above on this form.

Signature _____

Date _____