President’s Letter

ASPB—Cultivating a Dynamic Future in Plant Sciences

As I write this, my year as the Society’s president-elect is concluding and I am stepping in to the role of president. What an honor to serve as president of one of the largest scientific organizations dedicated to plant biology! My term as president-elect offered opportunities to experience firsthand the numerous workings of the Society. I am happy to report that the Society is piloted by dedicated and capable hands, from the professional staff headquartered in Rockville, Maryland, to the active members of our many committees that advance ASPB’s mission and functions. The dedication, talents, and accomplishments I see are truly exceptional. As a member of ASPB for more than 35 years, I confess that I often took the Society for granted, failing to notice the effective ventures advanced in support of the plant sciences and ASPB’s steady service to its member scientists. Among the many insights I have gained during the past year, foremost has been a renewed appreciation for the value of a strong society that continues to be a relevant and potent global influence; I challenge each of you to take a fresh look at ASPB, too.

As times change, the Society is responding proactively. In my future letters to the ASPB News, I hope to detail interesting new developments as they arise, but in my inaugural letter I want to touch on some exciting developments already under way. In response to a potentially changing financial landscape, the Society has launched two new ad hoc committees. One is the Business Development Committee, which is charged with identifying prospective revenue streams that, based on mission-relevant products and services, will allow the Society to continue providing services to its membership and the greater community for many years to come. The second committee is the Exploratory ASPB Foundation Committee, which will investigate approaches toward significantly increasing the size of the Society’s endowment, thereby bolstering the return on investment that supports much of the “good works” undertaken by ASPB each year. Both are bold moves that reflect the vision and quality of continued on page 4

Get Ready, Get Set…Get Nominating!

See page 7 for the 2012 Call for ASPB Nominations.
The ASPB News is delivered online as well as in print. Members will be alerted by e-mail when a new issue is posted. The ASPB News welcomes member feedback. Contact the editor at nancyw@aspb.org.

CONTENTS

1 President's Letter

5 ASPB Officers Assume Posts for 2011-2012

2011-2012 Awards Committees

7 2012 Awards: Get Ready, Get Set...Get Nominating!

9 AAAS/ASPB Mass Media Fellow Checks In

11 Plant Biology 2012—Call for Abstracts

13 People

17 Women in Plant Biology

21 Membership Corner

23 Public Affairs

24 Public Affairs Update

27 ASPB Education Forum

38 Obituaries


ASPB News

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the ASPB leadership. (I can say that because I was not personally involved in initiating either committee; those kudos are due, respectively, to Tuan-hua David Ho, who has just completed his term as immediate past president, and to Nick Carpita, whom I’m succeeding as president.)

From within the Society’s membership, a renewed and concerted effort is under way to encompass and integrate all sectors of plant biology. An important example of this that I wholeheartedly support is the initiative to expand the platform from which we address the interests of the private sector. I believe that our mission will be better served with the increased involvement of scientists working in industry. Open dialogue is one tangible way to foster connections and to ensure that the Society provides valuable and relevant service to science conducted outside academic and government research labs. As a first step, we have launched a new interest group, Bridging the Private & Public Sectors (http://my.aspb.org/members/group.asp?id=83752), that can help the Society effectively engage plant biologists across all career paths. Some scientists who have recently left my own laboratory are working for industry, not academia—a growing trend noted by many—and I hope that ASPB will continue to be an important contributor to their professional careers. I invite all members to join the new private–public interest group and promote dialogue (and action!) that leads to synergy. Just log in to the aspb.org site, point your browser to http://my.aspb.org/members/group.asp?id=83752, and click on the “Join group” logo near the top of the page (must be logged in).

As part of the visioning process, ASPB continues to play a leadership role at the national and international levels. One example of the Society’s leadership at the national level is the Plant Science Research Summit (http://www.aspb.org/plantsummit), organized by ASPB and held September 22–23 this year in Chevy Chase, Maryland, which brought together nearly 100 scientists and leaders to identify research priorities in plant science that can address the grand challenges facing the world today in areas that include human health, energy, food, and environmental sustainability. The group that convened included scientists whose interests range from fundamental to applied, as well as representatives of commodity groups and attendees working in academia, government, and the private sector. The post-summit work to draft a report that articulates a consensus plan to invigorate and guide plant science research over the next decade is under way now, and input into this draft report is being widely solicited from the broader community. (For more information, see article on page 23). Likewise, ASPB has been providing leadership at the international level through the Global Plant Council (http://globalplantcouncil.org) to help bring a unified voice to issues that are of a global nature, such as climate change. The Global Plant Council was initiated by ASPB in 2009 at the behest of former Membership Committee chair Mel Oliver, and its efforts will not only benefit plant biologists working in academia, government, and the private sector, but also, even more importantly, will conceivably help preserve the world as we know it for future generations to come. That is the kind of society to which we belong and that I am proud to be part of.

Finally, as the Society constantly strives to reflect the interests and needs of its membership, it frequently solicits and responds to feedback and comments. For example, a recent survey on the topic of the ASPB News revealed that many of you would prefer a more condensed version and, in particular, a shorter President’s Letter. So, I will close here—but with an invitation to members to contact me (or other members of the leadership; http://my.aspb.org/?G_Leadership) by phone or e-mail with your perspectives, suggestions, and concerns throughout this coming year.

Steve Huber
schuber1@life.uiuc.edu

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**ASPB Travel Grant Program for Plant Biology 2012 in Austin, Texas**

Travel grant applications will be accepted beginning January 2, 2012.
The submission deadline is February 10, 2012.
All applications must be submitted electronically at http://my.aspb.org/?Meetings_TravelGrant.
Recipients will be notified by mid-March.
ASPB Officers Assume Posts for 2011–2012

New ASPB officers and committee members assumed their responsibilities October 1.

Board of Trustees
Mary Lou Guerinot (12), chair
Jonathan D. Monroe (12), treasurer
Danny J. Schnell (13)
Richard Amasino (14)

Committee on Public Affairs
Richard T. Sayre (12), chair
Nicholas Carpita (12), immediate past president
Patrick S. Schnable (12)
Elizabeth E. Hood (13)
Norman Lewis (14)
Maureen McCann (14)
Julian Schroeder (14)
Sally A. Mackenzie (15)
David Stern (15)

Constitution & Bylaws Committee
Alice C. Harmon (12), chair
Dan Bush (12)
C. Robertson McClung (14)

Education Committee
Erin Dolan (13), chair
John C. Cushman (12)
Chad V. Jordan (12), adjunct member
Scott Woody (12), adjunct member
George Ude (13)
Susan Wessler (14)
Kathleen Archer (15)

International Committee
Leon V. Kochian (13), chair
Samuel Gido (12)
Jurandir Magalhaes (12)
Thomas W. Okita (12)
Bijay Singh (13)
George Ude (14)

Membership Committee
David P. Horvath (15), chair
Colleen Doherty (12)
Rebecca Arundale (13)
Frank G. Dobleman (13)
Leann Thornton (15)

Minority Affairs Committee
MariaElena B. Zavala (13), chair
Gokhan Hacisalihoglu (12), adjunct member
Linda Different Cloud Jones (12)
Beronda L. Montgomery (12)
Adán Colon-Carmona (13)
Jorge Vivanco (13)
John J. Harada (14)

Nominating Committee
Peggy Lemaux (12), chair, president-elect
Steven Huber (12), president
Nicholas Carpita (12), immediate past president

Program Committee
Julia Bailey-Serres (13), chair, secretary
Peggy Lemaux (12), president-elect
Judy Callis (13), past secretary
Janet Braam (12)
Todd C. Mockler (12)
Jeffrey E. Harper (13)
Andrew Bent (15)

Publications Committee
Sally A. Mackenzie (14), chair
Neil E. Olszewski (12)
Caren Chang (13)
Gary Stacey (15)
Georg Jander (16)

Women in Plant Biology Committee
Marta Laskowska (12), chair
Diane C. Bassham (12)
Michael M. Neff (12)
Wendy Peer (13)
Carolyn Wetzel (13)
Kateri Duncan (14)

Executive Committee
Steven Huber (12), president
Peggy Lemaux (12), president-elect
Nicholas Carpita (12), immediate past president
Julia Bailey-Serres (13), secretary
Jonathan D. Monroe (12), treasurer
Marguerite J. Varagona (12), elected member
Gloria Muday (13), elected member
Richard Vierstra (14), elected member
Estelle M. Harbak (12), Northeastern Section representative
Zhongchi Liu (13), Mid-Atlantic Section representative
David Logan (13), Western Section representative
Kent Chapman (14), Southern Section representative
Sarah Wyatt (14), Midwestern Section representative

2011–2012 Awards Committees

Following is a list of the membership of the ASPB awards committees for 2011–2012 as announced by President Steve Huber.

ASPB–Pioneer Hi-Bred Graduate Student Fellowship
Patty Springer (13), chair
Mark Cigan (13)
Patrick Schnable (13)
Bob Sharp (13)
Elizabeth Vierling (13)

Adolph E. Gude, Jr.
Ralph Quatrano (13), chair, past winner
Patrick H. Masson (13)
Julia Bailey-Serres (16)
Barbara Baker (16)
Stan Roux (16)

Charles Albert Shull
Ralph Quatrano (12), chair
Sean Cutler (12), past winner
Sam Zeeman (13)
B. Gail McLean (14)
Ray Zielinski (14)

Charles F. Kettering
Anthony Huang (14), chair
Sabeena Merchant (12), past winner
Ken Keegstra (13)
Marcos Buckeridge (16)
Don Ort (16)

Charles Reid Barnes Life Membership
John Boyer (13), chair
Peter Hepler (12), past winner
Ken Keegstra (13)
Ruth Grene (14)
Michael Thomashow (14)

Corresponding Membership
J. Derek Bewley, chair (14)
Bo Liu (12)
Shiv Tiwari (13)
Gerald Edwards (15)
Karen Koch (15)

Dennis R. Hoagland
Jan Leach (12), chair
Jorge Dubcovsky (12), past winner
Robin Buell (15)
Kendall Hirschi (15)
Elizabeth Hood (15)

Early Career
Kay Simmons (12), chair
Ravi Maruthachalam (12), past winner
Siobhan Brady (13)
Katherine Osteryoung (14)
Martin Spalding (14)

Eric E. Conn Young Investigators Award
Bijay Singh, chair (15)
J. Clark Lagarias (12)
Judy Callis (13)
Eve Wurtele (13)
Robert Last (15)

Excellence in Education
Jeffrey Coker (12), chair
Mary Williams, adjunct member (12)
Jane Ellis (13), past winner
Amy Clore (13)
Sharman D. O’Neill (13)
T. Kaye Peterman (13)

Fellow of ASPB Award
Wendy Boss (12), chair
Bonnie Bartel (12), past winner
Neil Baker (12)
Stan Roux (13)
Ram Dixit (14)

Lawrence Bogorad Award for Excellence in Plant Biology Research
Jen Sheen (14), chair
Nam-Hai Chua (12), past winner
Elizabeth Ainsworth (12)
Daniel Schachtman (14)
Maureen Hanson (16)

Martin Gibbs Medal
Neelima Sinha, chair (13)
Steve Kay (13), past winner
Steven Huber (13)
Gerald Berkowitz (17)
Alice Cheung (17)

Robert Rabson Award
Candace Haigler, chair (16)
Thomas Sharkey (14)
Michael Sussman (14)
Kanwarpal Dhugga (16)
Sharlene Weatherwax (16)

Stephen Hales Prize
Sheila McCormick (12), chair
Susan Wessler (12), past winner
Steven Huber (12)
Sarah Hake (13)
Richard Vierstra (13)

Summer Undergraduate Research Fellowship
Ken Helm, chair (12)
Robert Grebenok, co-chair (14)
Joseph Jez (14)
Karen Koster (14)
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2012 Awards: Get Ready, Get Set...Get Nominating!

It's Time to Acknowledge Our Fellow Plant Scientists

The 2012 Call for ASPB Award Nominations will be sent to all members on January 3. Nominations are due by Thursday, March 1.

ASPB encourages you to participate in the 2012 awards program by nominating deserving individuals. Please watch for the Call for Nominations in your mailbox or on our website (http://www.aspb.org/awards/nominate). In the meantime, please visit ASPB's awards pages (http://aspb.org/awards) so that you can see who among your colleagues has received these awards in the past and determine who else might be deserving in the future.

PLEASE NOTE: The nomination process has been streamlined. Letters of recommendation are no longer required for any awards except the ASPB–Pioneer Hi-Bred Graduate Student Fellowship. All that is required to make a nomination for ASPB's other awards is a one- to two-page letter of nomination and a detailed CV of the nominee. However, nomination committees may go back to the nominator and ask for more information if necessary. Nominations are submitted electronically as a single PDF file at http://aspb.org/awards/nominate.cfm.

The names of the award recipients will be announced in mid-April, via e-mail broadcast to ASPB members. These awards, which recognize the major contributions of recipients, will be presented at Plant Biology 2012 in Austin, Texas. Most of the awards are monetary, and with the exception of the Fellow of ASPB Award, winners are reimbursed for a portion of their travel expenses to Texas.

Awards to Be Given in 2012

ASPB–Pioneer Hi-Bred Graduate Student Fellowship
This award, made possible by the generosity of Pioneer Hi-Bred International, recognizes and encourages innovative graduate research and innovation in areas of plant biology that relate to important commodity crops, including corn, soybeans, rice, wheat, and canola. One $22,000 fellowship will be given annually from 2010 through 2013, with an additional $1,000 awarded for the recipient to attend the ASPB annual meeting in the year of his or her award. Each nominee must attend a U.S.-accredited college or university and must demonstrate interest in the study of plant biology or a related discipline. Each nominee must be a PhD candidate (have successfully passed their preliminary examinations), must demonstrate an excellent academic record (have achieved undergraduate and graduate GPAs of 3.5 or greater), and must be a member of ASPB. An individual may receive this fellowship only once.

Charles Albert Shull Award
This award was initiated in 1971 by the Society to honor Dr. Charles A. Shull, whose personal interest and support were largely responsible for the founding and early growth of the Society. It is a monetary award made annually for outstanding investigations in the field of plant biology by a member who is generally under 45 years of age on January 1 of the year of presentation or is fewer than 10 years from the granting of the doctoral degree. Breaks in careers will be considered when addressing the age limit of this award. The recipient is invited to address the Society at the annual meeting the following year.

Charles F. Kettering Award
This award was established by an endowment from the Kettering Foundation in 1962 to recognize excellence in the field of photosynthesis. It is a monetary award to be given to an individual, whether or not a member of the Society, in even-numbered years.

Charles Reid Barnes Life Membership Award
This award was established in 1925 at the first annual meeting of the Society through the generosity of Dr. Charles A. Shull. It honors Dr. Charles Reid Barnes, the first professor of plant physiology at the University of Chicago. It is an annual award for meritorious work in plant biology; it provides a life membership in the Society to an individual who is at least 60 years old. Membership is a requirement for the award, and, if appropriate, every fifth award should be made to an outstanding plant biologist from outside the United States.

Corresponding Membership
This honor, initially given in 1932, provides life membership and Society publications to distinguished plant biologists from outside the United States in recognition of their contributions to ASPB and to plant biology. The honor is conferred by election on the annual ballot. The committee selects no more than three candidates, and these are placed on the ballot for approval of corresponding membership by majority vote. The president notifies successful candidates of their election. Election of a corresponding member is to be considered each year and held if warranted, provided the election would not increase the number of corresponding members beyond 2% of the dues-paying membership. Membership is a requirement for this award.

Dennis Robert Hoagland Award
This monetary award, established by the Society in 1985 with funds provided by the Monsanto Agricultural Products Company, honors Dr. Dennis R. Hoagland, recipient of the first Hales award, for his outstanding contributions and leadership in plant mineral nutrition. The award, to be made not more frequently than triennially to an individual, whether or not a member of the Society, is for outstanding plant research in support of agriculture.

Early Career Award
The Society’s executive committee instituted the Early Career Award in 2005 to recognize outstanding research by scientists at the beginning of their careers. This award is a monetary award made annually for exceptionally creative, independent contributions by an individual, whether or not a member

continued on page 8
of the Society, who is generally not more
than five years post-PhD on January 1 of the
year of the presentation. Breaks in careers
will be considered when addressing the time
limit of this award.

**Excellence in Education Award**
This award, initiated in 1988, recognizes
outstanding teaching, mentoring, and/or
educational outreach in plant biology by an
individual, whether or not a member of the
Society. It is a monetary award to be made
annually in recognition of excellence in
teaching, leadership in curricular develop-
ment, or authorship of effective teaching
materials in the science of plant biology.

**Fellow of ASPB Award**
Established in 2007, the Fellow of ASPB
Award may be granted to current members
in recognition of direct service to the Society
and distinguished and long-term contribu-
tions to plant biology. Areas of contribution
may include education, mentoring, out-
reach, research, and professional and public
service. Examples of relevant Society service
include, but are not restricted to, service on
or on behalf of ASPB committees, service on
editorial boards of ASPB journals, and active
involvement in ASPB meetings. Current
members of ASPB who have contributed to
and been members of the Society for at least
10 years cumulative prior to their nomina-
tion are eligible for nomination. Recipients
of the Fellow of ASPB honor, which may be
granted to no more than 0.2% of the current
membership each year, receive a certificate
of distinction and a lapel pin.

**Lawrence Bogorad Award for
Excellence in Plant Biology Research**
The Lawrence Bogorad Award for Excellence
in Plant Biology Research was instituted by
the Society’s executive committee in 2006 to
honor Dr. Bogorad’s many contributions to
plant biology, including his influential efforts
to bring the techniques of molecular biology
to bear on problems in plant biology; his
groundbreaking research on chloroplast
genetics, biogenesis, structure, and function;
and his inspired teaching and mentoring.
This is a monetary award made biennially to
a plant scientist, whether or not a member
of the Society, whose work both illuminates
the present and suggests paths to enlighten
the future.

**Robert Rabson Award**
The Robert Rabson Award, first given by the
Society in 2012, recognizes Bob Rabson’s
steadfast advocacy of plant biology through
creation of funding programs in the Depart-
ment of Energy for research in basic energy
sciences. The award recognizes postdocs and
faculty-level early career scientists, whether
or not members of the Society, in academic,
government, and corporate research institu-
tions, who have made excellent contribu-
tions in the area of bioenergy research. The
award, which is made biennially, is a mon-
etary award that also provides a one-year
membership in the Society.

**Stephen Hales Prize**
This award honors the Reverend Stephen
Hales for his pioneering work in plant biol-
ogy published in his 1727 book *Vegetable
Staticks*. It is a monetary award established
in 1927 for an ASPB member who has
served the science of plant biology in some
noteworthy manner. The award is made an-
nually. The recipient of the award is invited
to address the Society on a subject in plant
biology at the next annual meeting.
Punchy Prose by Day, Passive Voice by Night
AAAS/ASPB Mass Media Fellow Checks In

The climax of my summer in Washington, D.C., came on a Thursday. That’s the day the embargo is lifted on articles in Science, so that’s the day when the first news stories come out about them (“this research appears in the current issue of the journal Science”). That Thursday, it was me saying those words and also intoning the magical “Maureen Langlois, NPR News” at the end of recording a newscast “spot”—one of NPR’s 60-second, top-of-the-hour news stories.

Earlier that day, I had met a different kind of deadline—sending my completed master’s thesis to my committee. When my NPR editor had asked if I’d be available for an additional month at the end of my AAAS/ASPB Mass Media Fellowship, how could I say no? Working at NPR was a dream. Never mind that the month between the end of my fellowship and my MS defense had been earmarked for full-time thesis writing and revision.

By day, I apprenticed in what I have come to recognize as the craft of science journalism—distillation of the complex into the essential; developing a nose for a story and an ear for a line; shaping vampire bat biochemistry, tundra carbon flux, and particle collider politics into rich, delicious, and—the real challenge—nutritious morsels for the public to consume. I learned to be allergic to jargon but still drive a point home in as few words as possible.

By night, the word limits were lifted, as was the imperative to illustrate with words. In fact, after reading early drafts of my thesis chapters, my adviser chastised me for sounding too much like a “liberal arts graduate.” “Avoid visual descriptive words like ‘colorful,’” he said. My research was on the photochemistry of organic water pollutants in wetlands—which is an example of way too much jargon for my NPR editors. At night, I relished being able to use technical words to state ideas precisely—albeit, in the passive voice; in sentences burdened with parentheses and numbers; and in hundreds of words rather than, at NPR, hundreds of characters.

I relished the juxtaposition. And yet on the day that both of my experiences culminated—that Thursday when I wrote and voiced a nationally broadcast science news spot and also finished my thesis—I knew which piece of writing gave me greater satisfaction. The challenge of condensing top-notch research into 60 informative and interesting seconds generated a more meaningful act of communication than my hundred-odd pages of environmental photochemistry, comprehensible only to other environmental photochemists.

I have since finished my time at NPR (two news spots by the end, as well as a fair amount of producing and writing to my credit) and have just defended my thesis at The Ohio State University. Now I’m looking for work as a science communicator, either from the media side or as a public information representative for a university or institute. I’ve discovered that although the need for science—especially environmental—reporting is greater than ever, the ongoing revolution in media and the weak economy mean that there are few jobs for science reporters, especially in the Midwest, where I’d prefer to live.

For that reason, I am all the more grateful that ASPB put forth funding for me to be able to work at NPR this summer. The experience was life changing, and by the end of the summer, I was able to give back: I was able to help the news media decide what is news, and I was able to do that better because I am a scientist!

Maureen Langlois
langlois.8@osu.edu
Next year in Austin!

Join your colleagues at Plant Biology 2012 in Austin, Texas on July 20–24

http://www.aspb.org
Call for Abstracts
Plant Biology 2012

Abstract Submission Opening January 2012

Read How ASPB Minisymposia Are Selected at http://my.aspb.org/mini-selection

The abstracts and program details will be available for viewing and searching online in April 2011. The website will make it possible for you to prepare and print out a personal itinerary to guide you at the meeting.

Travel Grant Applicants: please submit your application abstract through the Travel Grant Application process online. Submitting for Plant Biology 2012 will not automatically submit you for a travel grant.

The Plant Biology format will include six major symposia and up to 30 minisymposia based primarily on the abstracts submitted under the topic categories listed in the sidebar. The Program Committee determines the titles and contents of the minisymposia after reviewing the submitted abstracts. Oral presentations are required for those abstracts selected for minisymposia. Suggestions for minisymposia topics are welcomed and should be submitted online.

In addition to the scientific abstract submission, there is a field on the form titled “Broader Impacts.” Please use this field to describe novel education outreach activities. This submission (600-character limit) will serve as the basis for selection of a special Education and Outreach minisymposium.

Categories are purposely broader than in previous years. Keyword selections are added to the submission process to assist with the selection of minisymposia and searching of abstracts.

There will be no printed abstract book this year. Instead, memory sticks with the full abstracts will be provided to attendees. Titles and authors only will be printed in the program book.

Guidelines
• A member of ASPB may submit or sponsor only ONE abstract.
• A $50 fee will be required for each abstract and will be refunded as a rebate within 30 days of receiving paid registration for the abstract submitter or the registrant designated by the submitter.
• Registration is required by the last day of preregistration: June 15, 2012. Otherwise, your abstract will be deleted from the online listing, and no poster space will be reserved.
• The body of your abstract cannot exceed 300 words.
• DO NOT include any graphics or tabular material in the body of your abstract.
• Follow the online instructions for inserting special characters, superscripts, or subscripts.
• Proofread your abstract, double-checking any special characters.
• Select a topic category from the list in the sidebar.
• If you wish your abstract to be considered for a minisymposium or talk, please indicate so on the online form.

Submission Deadlines
• Abstracts must be submitted via the web* at http://www.aspb.org/abstracts.
• To be considered for inclusion in a minisymposium, submit abstract by March 2, 2012. Posters may be submitted at any time abstract submission is open.
• For inclusion in the memory stick abstract listings, submit by June 1, 2012.

*The online submission form provides an author the opportunity to request that an abstract be presented only by poster.

Abstract Categories

- Algae
- Applied Plant Biology / Biotechnology / Molecular Breeding
- Biochemical Processes and Macromolecular Structures
- Biofuels
- Cell Biology
- Development
- Ecophysiology
- Education and Outreach
- Environmental Stress and Adaptation to Stress Subcategories:
  - General/Integrated
  - Light
  - Salt/Metals/Nutrients
  - Temperature
  - Water
- Gene Regulation and Molecular Biology
- Genetics, Genomics, and Molecular Evolution
- Hormone Biology
- New Model Systems and Technological Advances
- Non-vascular Plants
- Photosynthesis
- Plants and Climate Change
- Plants and Human Health
- Plants Interacting with Other Organisms
- Signal Transduction
- Systems and Computational Biology and Bioinformatics
- Whole Plant Physiology
Are you interested in science writing?

Do you want to help people understand complex scientific issues?

Apply for the AAAS/ASPB Mass Media Science & Engineering Fellows Program and learn how to increase public understanding of science and technology. Fellows in the 10-week 2012 summer program will work as reporters, researchers, and production assistants in mass media organizations nationwide. **Deadline: January 15, 2012.**

**Former host sites include:**
- *Chicago Tribune*
- *Los Angeles Times*
- *National Public Radio*
- *Sacramento Bee*
- *Scientific American*

Visit [http://www.aaas.org/programs/education/MassMedia/](http://www.aaas.org/programs/education/MassMedia/) for more details and to download an application brochure, or call 202-326-6441 for more information.
Carole Dabney-Smith Honored by President Obama

The White House recently named ASPB member Carole Dabney-Smith as one of the 94 researchers to receive a Presidential Early Career Award for Scientists and Engineers (PECASE). She received her award at a White House ceremony on October 14.

The awards were established by President Clinton in 1996 to honor the most meritorious scientists and engineers whose early accomplishments show the greatest promise for assuring America’s preeminence in science and engineering. They are based on nominations from 16 federal departments and agencies. Awardees are selected for their pursuit of innovative research at the frontiers of science and technology and their commitment to community service as demonstrated through scientific leadership, public education, or community outreach.

“It is inspiring to see the innovative work being done by these scientists and engineers as they ramp up their careers—careers that I know will be not only personally rewarding, but also invaluable to the nation,” President Obama said in a White House statement. “That so many of them are also devoting time to mentoring and other forms of community service speaks volumes about their potential for leadership, not only as scientists but as model citizens.”

Carole, who was nominated by the Department of Energy (DOE), is assistant professor of chemistry and biochemistry at Miami University in Oxford, Ohio. She conducts research on protein sorting and transport within cells, focusing on chloroplasts and mitochondria from plant cells.

Norman Lewis Receives $40 Million USDA Award to Develop Biofuels from Sustainable Lumber Stocks

The U.S. Department of Agriculture (USDA) has made two $40 million consortia grants to Washington State institutions to use sustainable woody biomass in the Pacific Northwest to produce biofuels for aviation and other petrochemical uses. One award, which is led by ASPB member Norman Lewis and Michael Wolcott of Washington State University, will support the Northwest Advanced Renewables Alliance (NARA). NARA is a collaborative effort among university, government, and industry scientists to seek to produce domestic aviation fuel using wood that is either developed for this purpose, burned in forests after harvest, removed during thinning to improve forest health, or destined for landfills as waste from building demolitions and other sources.

At a September press event announcing the grants, Agriculture Secretary Tom Vilsack said, “I’d bet my life” on the growth of a tree-based biofuels industry. “This is an opportunity to create thousands of new jobs and drive economic development in rural communities across America by building the framework for a competitively priced, American-made biofuels industry,” he said.
People

Carole Dabney-Smith
continued from page 13

Most proteins found in those organelles are encoded by genomic DNA and are synthesized in the cytoplasm. Survival of the plant and proper development of the organelle depend upon accurate sorting of proteins to their correct sub-organelar location. Carole studies a recently discovered system that transports fully folded proteins into the thylakoid lumen using only the thylakoid proton motive force as energy source and a homologous system in mitochondria that likely transports proteins from the matrix to the inner membrane space. According to DOE’s citation, she was honored “for imaginative research on the unique pathway that transports folded and assembled proteins across lipid membranes in plants to form the energy-harvesting complexes of photosynthesis and for excellent mentorship of developing scientists.”

Carole follows two ASPB members who received PECASE honors last year: Magdalena Benzanilla of the University of Massachusetts and Dominique Bergmann of Stanford University.

Adam P. Fagen, PhD
ASPB Public Affairs Director

Norman Lewis
continued from page 13

“Public–private partnerships like these will drive our nation to develop a national biofuels economy that continues to help us grow and outcompete the rest of the world while moving our nation toward a clean energy economy.”

One aspect of the award in support of NARA that has particular relevance to plant biology is the alliance’s intention to use the most recent technologies and scientific approaches to help overcome long-standing issues in using woody biomass for biofuels production. NARA’s approach, in part, will use the most advanced genomic technologies, as well as phenomics, to identify the most promising sources of biofuels from tree lines that are currently available (e.g., Douglas fir, western hemlock, poplar, and red alder). The five-year award has four main deliverable components: feedstock development, sustainable feedstock production, logistics, and conversion and refining to reach these goals. In addition, a significant effort will be made to learn how to break down lignin more effectively. As one of the major components of wood, lignin acts as glue that holds together the components of plant cell walls and provides wood with its strength. However, lignin is difficult to break down and reduces the bioavailability of other cell wall components, resulting in a technical barrier to the use of woody materials in biofuel production.

“We believe we can begin to resolve the issues that have prevented wood-based biofuels and other petrochemical substitutes from being economically viable with some new strategies and the diversity of skills represented on the NARA team,” said Norman. “If we are successful, the potential to begin to replace the natural resources jobs lost in the region over the past several years is very high.”

A second $40 million grant will go to the University of Washington to focus on using poplar trees as a source material for sustainable biofuel production, since the trees are fast growing and can be harvested within a few years.

Norman is Regents Professor and director of Washington State University’s Institute of Biological Chemistry and a member of Scotland’s National Academy of Science and Letters. He currently serves on ASPB’s Public Affairs Committee and formerly was a monitoring editor for Plant Physiology.

Kathy R. Munkvold, PhD
Public Affairs Manager
kmunkvold@aspb.org

Kathy R. Munkvold, PhD
Public Affairs Manager
kmunkvold@aspb.org
Members in the News

Stay up-to-date on news about plant science and ASPB members in the news by following ASPB’s Plants in the News blog (http://www.aspb.org/plantsinthenews) and follow ASPB on Facebook (http://facebook.com/myASPB) and Twitter (http://twitter.com/ASPB).

Peter J. Davies and Alan McHughen have been selected as Jefferson Science Fellows (JSFs) (http://bit.ly/omFEXV). Established by the U.S. Secretary of State in October 2003, the JSF program engages the American academic science, technology, engineering, and medical communities in the formulation and implementation of U.S. foreign policy. Fellows spend one year on assignment at the U.S. Department of State or U.S. Agency for International Development (USAID) as science advisers on foreign policy issues. As part of their assignments, Jefferson Fellows also have the opportunity to travel to U.S. embassies and missions overseas. Following the fellowship year, fellows return to their academic career but will remain available to the U.S. Department of State/USAID for short-term projects over the subsequent five years.

Peter is a professor of plant physiology at Cornell University, where he has been teaching plant physiology, especially to students of agriculture and horticulture, for 42 years. His expertise is in the field of plant development, especially plant hormones; he is the producer and editor of the principal monograph in the field, Plant Hormones, Biosynthesis, Signal Transduction, Action! More recently he has broadened his teaching to educate non-biology students in the societal implications of advances in biology with a course covering diet to disease, DNA to deforestation. At the Department of State he is in the office of Agriculture, Biotechnology and Textile Trade Affairs, where he is involved in the international promotion of GM crops from a trade perspective, with special responsibility for Europe.

Alan is a cooperative extension biotechnology specialist and geneticist on the faculty of the University of California, Riverside. A molecular geneticist with an interest in crop improvement and environmental sustainability, he developed internationally approved commercial crop varieties using both conventional breeding and genetic engineering techniques and helped formulate U.S. and Canadian regulations testing the safety of genetically engineered crops and foods. As an educator and consumer advocate, he helps nonscientists understand the environmental and health impacts of both modern and traditional methods of food production. His award-winning book, Pandora’s Picnic Basket: The Potential and Hazards of Genetically Modified Foods, uses understandable, consumer-friendly language to explode the myths and explore the genuine risks of genetic modification technology. He shared a grant from the ASPB Education Foundation in 2004 for enabling academic scientists’ participation in public dialogue.

Elisabeth Gantt has been honored with the highest award from the Phycological Society of America (PSA): the PSA Award of Excellence (http://bit.ly/oQA0Y1). The award honors scientists who have had a major impact on phycology—the study of algae—through sustained scholarly activity, including teaching and service. Beth’s contributions include discovery of the distinctive localization of the phycobiliproteins in rhodophyta and cryptophyta chloroplasts, understanding of the biosynthesis and roles of carotenoids, and involvement in the Porphyra umbilicalis genome project. Beth is professor emerita and distinguished university professor at the University of Maryland, College Park. She is a member of the National Academy of Sciences and received the academy’s Gilbert Morgan Smith Medal in 1994. Beth has served as secretary and president of ASPB and as a member of various committees including the Public Affairs Committee. She received ASPB’s Stephen Hales Prize in 2002 and was named to the inaugural class of ASPB Fellows in 2007.

Ed Kaleikau has been named one of two recipients of the Director’s Award for Excellence in Science and Education from the USDA’s National Institute of Food and Agriculture (NIFA; http://bit.ly/p9LCNY). He was recognized for “his exceptional strategic national and international leadership and visibility for plant genomics,” particularly cross-government coordination of plant genome research. According to the

continued on page 16
Ed Kaleikau receives his award from NIFA acting director Chavonda Jacobs-Young.

Yi Li

Yi Li and his research team have received a lot of media attention for their recent paper in *HortScience* about the production of a triploid form of *Euonymus alatus*, commonly known as burning bush (http://bit.ly/rcCNm1). The plant is popular in landscaping in the United States ($38 million in sales each year) because of its showy red leaves, but it is also highly invasive because of its prolific seed production and effective seed dispersal by birds. Yi's paper reports making a sterile triploid form of *E. alatus*; this seedless, noninvasive form of the popular plant can be used to replace the currently used invasive counterparts. The research was picked up by the Associated Press and subsequently published by dozens of news outlets, including Salon.com, *The Kansas City Star*, *The Sacramento Bee*, USA Today, and many more newspapers, television stations, websites, and other media sources. Yi is a professor in the Department of Plant Science and Landscape Architecture at the University of Connecticut and director of the New England Center for Invasive Plants.

Compiled by Adam P. Fagen, PhD

ASPB Public Affairs Director
Reflections on Plant Biology 2011 from Women’s Young Investigator Travel Awardees

The Women in Plant Biology Committee awarded seven Women’s Young Investigator Travel Awards (WYITAs) that awardees put toward their costs for attending the 2011 ASPB annual meeting in Minneapolis, Minnesota. The criteria for selection of awardees in this annual program include that the women investigators are within their first five years as faculty-level independent investigators in academia, industry, or government. The 2011 awardees work at either primarily teaching or major research institutions in India, South Africa, Taiwan, the United Kingdom, and the United States (New York, Ohio, and Indiana)—a geographic spread that reflects ASPB's membership. We invited the awardees to tell us a bit about themselves, their research, and their experiences at Plant Biology 2011.

Ulrike Bechtold

I received my PhD in 2003 from the University of East Anglia, UK, and in November 2010 I was appointed as a lecturer at the University of Essex, UK, after a number of postdoctoral years. During my last two years as a postdoc, I worked primarily on drought responses and cellular stress signaling pathways using a systems biology approach that involves transcriptomics and modeling. My own research continues to be in the area of plant ecophysiology, where I am studying plant adaptations in response to heat, drought, and other environmental stresses. I aim to identify key genes and define signaling pathways involved during abiotic stress responses. In particular, I am currently focusing on studying plant water relations for the improvement of water productivity. For this I am using genetic and physiological approaches to identify natural variation among Arabidopsis genotypes. I am also interested in posttranslational modifications of proteins associated with sugars. I have previously received funding from the Royal Society for this work, and I continue to study the role of a range of protein modifications in plants in response to environmental stresses.

My attendance at Plant Biology 2011 was greatly assisted by the WYITA travel grant, which gave me the opportunity to present my research to a wide audience of plant biologists. I had many excellent and stimulating conversations during poster sessions and after presentations, during which I exchanged ideas with a number of early career and more senior scientists. This may lead to opportunities for collaborations with U.S. groups in the future. There were a number of very interesting and excellent scientific sessions, but for me the talk by Deborah Delmer was particularly inspiring. Deborah highlighted examples of plant research that started in the lab which have been taken through to the field with potential impact on world agriculture. She emphasized the challenges plant biologists face and the need for more applied and translational research. This reminded me of the reasons why I want to work in plant science and gave me a real boost to continue with my goals in my own research. E-mail: ubech@essex.ac.uk

Su-Chiung Fang

Being a woman scientist and just starting my career as a principal investigator outside the United States, it is absolutely an honor and a thrill to have received an ASPB 2011 Women’s Young Investigator Travel Award. I am thankful to the committee for choosing me as one of the awardees. This travel award was very helpful in covering the expense of my international travel to Minneapolis.

My work as an assistant research fellow at the Biotechnology Center in southern Taiwan focuses on underlying genetic networks controlling size homeostasis in the unicellular green alga Chlamydomonas reinhardtii. During the course of our studies, we have started to accumulate fundamental understanding on algal proliferation. Because of my interest in algae-based biofuels, I paid special attention to the related topics during the meeting. Thanks to the increased amount of resources and efforts pouring into “green fuel” research, an impressive number of posters and talks at the meeting were devoted to understanding various aspects of biology that potentiate and promote plants/algae as fuel feedstocks. I am very excited to see that Chlamydomonas has become a popular model system to advance our basic knowledge, as well as a tool to demonstrate the proof-of-principle strategy. It will be of great interest to see how ongoing research will help develop a commercially viable biofuel system.

continued on page 18
Suja George

I am currently working as a scientist at the Department of Biotechnology at M.S. Swaminathan Research Foundation (MSSRF), Chennai, India. I obtained my doctorate degree in biotechnology from the University of Madras in January 2008. The title of my thesis is “Genetic Engineering for Abiotic Stress Tolerance Using Prosopis juliflora (Swartz) DC as a Model Plant System for Gene Mining.” During my doctoral work, I was entrusted with the challenging task of assessing and ascertaining the potential of the phreatophyte P. juliflora as a model plant system for studying abiotic stress tolerance. I created a cDNA library of P. juliflora leaf tissue after drought stress and used EST sequencing as the method of choice for mining genes involved in abiotic stress tolerance. I characterized several genes functioning in abiotic stress tolerance using molecular and biochemical techniques, and I succeeded in developing transgenic Indica rice varieties tolerant to drought stress by transformation of a GST gene from P. juliflora.

In my research career spanning eight years (five years of PhD and three years postdoctoral), I have published 13 research articles including reviews, original research papers, and book chapters. I have one international patent, and my work has been nominated for many awards. I am a reviewer for many journals and currently principal investigator or co–principal investigator in many research projects being carried out in our institute.

My current job profile involves preparation of new concept notes and project proposals in line with the focus areas of our institution, providing technical guidance to project and PhD students, designing research experiments, troubleshooting, evaluating results, supervising the work of research associates and senior and junior research fellows, and preparing manuscripts of the completed research work for publication.

Attending Plant Biology 2011 was a great experience. As a plant biotechnologist, I benefited immensely from it. I was exposed to cutting-edge research in plant biotechnology and got a chance to meet eminent scientists from various research organizations all over the world. Interacting with them has provided me with new ideas for research that might even lead to collaborative research between my institution and other institutions in the future. E-mail: suja_gauri@yahoo.com

Kerry Lutz

I am a full-time assistant professor at Farmingdale State College, a small under-graduate institution on Long Island in New York. This is a tenure-track position, and I have just completed my second year at the college. The main focus of the college is teaching, and I have taught lecture and laboratory courses on such topics as biological principles, principles of genetics, and molecular biology. I also perform research with several students during the semester. The students are working on a project to develop a reliable plastid transformation protocol that yields fertile Arabidopsis thaliana plants. The students have learned techniques such as CTAB DNA isolation, Southern blotting, flow cytometry, and sterile plant tissue culture.

I have been a member of ASPB since 2006, when I was a graduate student at Rutgers University. That year I attended the ASPB meeting in Boston and presented a talk titled “Phage Site-Specific Recombinases for Marker Gene Excision in Tobacco Chloroplasts.” Due to the close proximity to Farmingdale, I also was able to attend the ASPB Northeastern Section meeting on Long Island in 2010. There I presented a poster titled “Isolation and Analysis of High-Quality Nuclear DNA with Reduced Organellar DNA for Plant Genome Sequencing and Resequencing.” Although I have limited resources for travel to conferences and to perform research, I keep current on research topics and attend as many local meetings as possible. Because Farmingdale College is a small state-funded school, there are limited sources for travel awards.

I was therefore thankful that I received the Women’s Young Investigator Travel Award so I could attend the meeting in Minneapolis. Not surprisingly, since my research focus is in chloroplast biology, I found the talks focusing on organelle biology (Symposium IV and Minisymposium 23) the most valuable. It was important for me to be able to see all of the advances made in organelle biology in the past few years. Although the talks on organelle biology were interesting, my favorite part of the ASPB meeting was...
being able to see all of the research that is being performed in other fields of plant biology that are not my major research focus. I was intrigued at the advances that have been made in understanding the role of small RNAs in gene regulation, as well as the many uses for high-throughput sequencing. I also found that the poster sessions allowed me to meet other researchers working on various aspects of plant biology. Talking with those who came to my poster (as well as with those whose posters I visited) gave me some good ideas that I plan to follow up on in the near future. E-mail: lutzk@farmingdale.edu

**Rachael Morgan-Kiss**

I grew up in Vancouver Island, British Columbia, Canada. I became interested in plant biology and plant stress physiology in my junior year as an undergraduate. During my senior year, I did an honors thesis investigating the impacts of salt and water stress on bean and pea seed germination and seedling chlorophyll content. These simple early studies led to my desire to pursue graduate studies in crop stress physiology, and I went to work for Norman Huner in the Plant Biology Department at the University of Western Ontario. Although the research in Norm’s laboratory focused on cold tolerance in crop species, at that time Norm was also interested in how cold adaptation in a psychrophilic species, at that time Norm was also interested in. Currently, he is working on understanding how abiotic stresses, such as nutrient deprivation, limiting light conditions, and low temperatures, impact the distribution and nutritional mode of single-celled microbial eukaryotes that are capable of switching between photoautotrophy and heterotrophy. We’re addressing this work in ice-covered Antarctic lakes that exhibit permanent gradients in key physical and chemical characteristics. These studies in the natural aquatic communities are complemented with experiments in the laboratory that focus on physiological modulations in the photosynthetic apparatus in pure photoautotrophic versus mixotrophic protist species. Our overall goals for this project are to enhance our understanding of the role of protists in the global carbon cycle and to predict how anthropogenic climate change may impact the functional roles of protists in aquatic ecosystems.

I want to thank the Women in Plant Biology Committee for supporting my work by providing travel funds to attend the 2011 ASBP meeting. I have not attended an ASBP meeting for several years, and it was a rewarding experience in some diverse and sometimes surprising ways. I was extremely impressed with the attention to recognition of undergraduate-driven research. Coming from an institution that emphasizes nontraditional undergraduate experiences, such as undergraduate independent research, I saw that the ASBP meeting is a great venue for undergraduates to present their research. This was the first large science meeting that my undergraduate student had ever attended, and I thought the undergraduate symposium was very beneficial for his professional growth. I hope ASBP will continue to support and recognize undergraduate research. I also found several of the workshops very helpful and informative. Specifically, I attended two great evening sessions on producing high-quality images for publication and a lunch workshop on improving quantitative western blotting. I took away a number of new skills from these workshops and have already passed some of these along to colleagues in my department. E-mail: morganr2@muohio.edu

**Wendy Ann Peer**

I am a tenure-track assistant professor in the Department of Horticulture and Landscape Architecture, Purdue University. My research focuses on cell biology and molecular physiology, and my current research interests include the study of factors affecting plant architecture required for seedling establishment and sustainable agriculture, focusing on the roles of M1 and M24 metalloproteases. The M1 proteases appear to have roles in meiosis, mitosis, cytokinesis, and cell differentiation. The M24B proteases appear to have roles in hormonal signaling and act at the interface of hormonal crosstalk and nutrition. I am also studying the evolution of flavonoid function, including flavonoid/hormone interactions with reactive oxygen species signaling, and the roles of flavonoids continued on page 20
in human health. In collaboration with Angus Murphy, I also conduct an integrated academic year and summer internship program for undergraduates from traditionally underserved backgrounds and nontraditional students.

I thank the Women in Plant Biology Committee for the travel award, which helped to make my trip to Plant Biology 2011 possible. I enjoyed attending the meeting, and I deeply appreciate the opportunity to chair the session on hormonal crosstalk and to present the work on the Arabidopsis M24B metalloprotease APP1. I especially enjoyed the discussions with other scientists following the talk. The ideas and insights from colleagues are invaluable, and one of the best ways to have these interactions is through attending meetings such as the ASPB annual meeting. Attending meetings also provides opportunities to form new collaborations and meet current collaborators face to face. I also enjoyed the Women in Plant Biology luncheon speaker, Karen Plaut, who discussed the progress that women have made in the sciences and yet pointed out that we still have ways to go. I guess that’s why we still have the Women in Plant Biology Committee! And, of course, catching up with old friends over lunch and dinner is the frosting on the cake. E-mail: peerw@purdue.edu

Margaretha J. van der Merwe

My work focuses on investigating novel molecular and chemical regulators that are involved in modulating short-, mid-, and long-range communication and signaling networks as a driving force for better understanding biomass accumulation. At the ASPB annual meeting, I presented work identifying inter-kingdom signaling molecules and using modern molecular biotechnology tools, including transcriptomics, proteomics, metabolomics, and fluxomics to study their bifurcations in different genetic plant backgrounds. By using a comparative cDNA microarray approach, my lab has identified several interesting points of transcriptional regulation, spurring further research in this area. Furthermore, we are also pursuing other plant endogenous signaling events, including the potential long-distance signaling capacity of peptide hormones in tomato and the occurrence and further functional characterization of novel signaling modulators of plant primary metabolism participating in the Calvin cycle. In addition, my research includes the elucidation of novel subcellular metabolite distributions and their significance in organellar communication.

This type of research was not only highly relevant in the context of the ASPB meeting held in August in Minneapolis, but also I found that the interaction with several abiotic and biotic stresses covered in the parallel and main symposium sessions were pertinent to my own research questions. The meeting was highly successful in allowing me to meet and interact with people having similar (but not the same) research interests and critically reassess my own experimental designs and approaches, as well as just have a lot of fun at the hoedown! E-mail: marna.vandermerwe@uwa.edu.au

Look for announcements and information on how to apply for a 2012 WYITA in the coming year.

Compiled by Wendy A. Peer
Purdue University
peerw@purdue.edu

Freelance science editors sought to update Teaching Tools in Plant Biology lectures

The Plant Cell seeks freelance editors to revise and update Teaching Tools in Plant Biology lectures (www.teachingtoolsinplantbiology.org). TTPB is a feature of The Plant Cell (www.plantcell.org), the leading research journal in plant biology and a publication of the American Society of Plant Biologists (www.aspob.org). TTPBs include review articles written for students and sets of PowerPoint slides for use in teaching. TTPBs are revised annually to include the most up-to-date, accurate information. Freelance editors will identify important review and research articles published within the past 12 months, update the lecture notes to reflect significant new or modified ideas, and produce new or updated slides as needed. The editor can work from home but must have access to current scientific journals. Compensation will be on a per-lecture basis.

Required Qualifications: Demonstrated ability to explain complex scientific concepts clearly and concisely; excellent editing and writing skills. Facility to grasp unfamiliar research concepts and to communicate ideas effectively. PhD in any discipline in biology or equivalent research experience in plant cell and developmental biology. Access to major research and review journals (e.g., through an affiliation with a university).

Positions available immediately. Send cover letter to nancyw@aspb.org (Subject line: TPC freelance editor) addressing why this position interests you. Also include resume/curriculum vitae and one scientific editing or writing sample if available.
ASPB members share a common goal of promoting the growth, development, and outreach of plant biology as basic and applied science. This column has featured some of the dedicated and innovative members of ASPB who believe that membership in our Society is crucial to the future of plant biology. Look for our updated Membership Corner in early 2012!

Name: David Horvath  
Title: Research Plant Physiologist  
Place of Work or School: United States Department of Agriculture, Agricultural Research Service  
Research Area: My research interests have always focused on plant stress and development and the signal transduction processes that go into changing gene expression, allowing plants to adapt and develop appropriately to their environment. I currently am focusing on understanding shoot bud dormancy in an invasive perennial weed called leafy spurge (Euphorbia esula). I also have a side project in collaboration with Sharon Clay at South Dakota State University studying how crops sense and respond to weeds.  
Member since: 1990(?) or thereabouts, with a bit of a lapse during my impoverished postdoc and early scientist years.

1. Has being a member of ASPB helped you in your career? If so, how?  
The USDA encourages its scientists to play active roles in professional organizations, and part of how we are evaluated for promotion relies on our visibility among other scientists. Thus, just being an active member in ASPB has helped me get promoted. However, and more important, the connections I have made through my active membership have frequently brought me into contact with some truly brilliant people who have provided me with new information (including the results of unpublished experiments) that have helped me in developing my own hypotheses and making connections to seemingly unrelated biological processes that I otherwise might not have made.

2. Why has being a member of ASPB been important?  
Besides the obvious early access to information provided by connections made with other members, ASPB provides connections to policy makers in Washington. As a government employee, I am not allowed to lobby for programs that might directly benefit my research. However, ASPB does this for me. I know they fight to help maintain funding for plant research—something that is becoming increasingly important given the budget cutting going on in Washington.

3. Was someone instrumental in getting you to join ASPB?  
Two people actually. My old boss, Mike Thomashow, encouraged me to join ASPB when I was a grad student, and my current boss, Mike Foley, impressed upon me the necessity for being active in a scientific society as a career enhancement tool.

4. What would you tell nonmembers to encourage them to join?  
I'd probably start by showing them pictures from recent ASPB meetings: past presidents wearing Gumby Brothers hats, the strange scientist wearing steampunk at the hoedown (me), and things like that. Then I'd probably tell them about some of the great talks I've heard, such as Ottoline Leyser's talk on strigolactones at this year's meeting. Continuing, I'd talk about some of the fascinating and brilliant people I have met through my ASPB activities. I'd probably also tell them about what ASPB has done to help maintain research funding and to counteract some of the misconceptions out there that would severely limit plant research if they went unchallenged. I remember the letter writing that went on after the flap in the media about government money being spent to study "plant stress," as if "plant stress" was about research on the psychology of stressed-out plants. Then, I'd point out how inexpensive a membership is relative to other scientific societies and perhaps discuss some of the price breaks that some biological supply companies offer to ASPB members. In conclusion, I'd probably end my pitch by showing them the ASPB website and the new networking capabilities it offers. (Can you tell I'm on the ASPB Membership Committee?)

5. Have you found a job or hired anyone using ASPB job postings or networking at the annual meeting?  
Not yet, but I keep my ears open at the meetings and my resume up-to-date on the ASPB website, just in case the government ever decides to defund the Agricultural Research Service. I have advertised for postdocs on the site, but I never thought to ask which advertisements the applicants were responding to.

6. Do you still read print journals? If so, where do you usually read them: work, home, library, in the car, or on the bus?  
No. I typically don't read print journals, although I do occasionally print off individual articles from the
7. Has there been an issue in plant biology where you thought ASPB should be involved or that led you to consider being active in the governance of ASPB, and what was it?
Yes, I have been inspired by the efforts of some members of ASPB, such as Nina Fedoroff, to counteract the non-GMO hysteria out there. I look forward to the day when government and university scientists can sensibly use this technology to solve local problems, rather than having this technology be the sole purview of the big agroscience industry with its inherent limitations to one-size-fits-all products due to the current cost constraints of getting such products to market. I wouldn't mind being part of the ASPB-led team to help bring this about.

8. What could ASPB do better?
The ASPB meeting is one of the highlights of my year, but occasionally I have to miss it for various reasons. I think one thing ASPB could do better is give the membership better access to the information presented at the meeting. A few years back (when the meeting was in Hawaii), several of the special anniversary talks were made available on the web page as audio files. I very much appreciated being able to listen to these as I was unable to attend that meeting. I think all posters and talks should be made available on the web page for members who, for whatever reason, cannot attend the meeting. It wouldn't be as good as being there with the opportunity to talk directly to the presenters and ask questions, but it would provide significant value for members (and thus inspire people to join and regularly renew their memberships) and help enhance the flow of information and networking capabilities for which scientific societies such as ASPB were formed.

9. What do you see as the most important role for scientific societies such as ASPB?
Networking and enhancing the flow of information. I think this is why all scientific societies were formed. Until recently, these goals were met by the publishing of journals and organizing meetings. However, with the power of the Internet (which makes journal access much easier), I think more can be done to provide avenues for identifying others working in my field and for sharing data more quickly. I think there is the opportunity to perhaps even share data that is important and sound, but which might not be publishable since it is terminally incomplete (due to things such as funding loss) or provided negative results that didn't make for an exciting enough story.

10. What advice would you give to a plant scientist just starting out?
Read everything you can get your hands on, and make sure to include journals outside your normal field of interest. The time I spent as a grad student reading about Drosophila HOX genes in the journal *Cell* was instrumental in helping me understand meristem growth and development in plants and primed me nicely for recognizing the probable role of chromatin remodeling in bud dormancy and during the critical weed-free period in corn. In my opinion, being able to make these tangential connections is only going to increase in importance as the genomics era advances.

11. What do you think is the most important discovery in plant biology over the past year and why?
I might be biased by my own interests, but I think the most important discovery this year was that the two FLOWERING LOCUS T (FT) genes in poplar have different roles, with one promoting flowering and the other promoting vegetative growth (1). I believe there will be some interesting connections between FT2 and cell cycle regulations with feedback/control by both developmental and environmental signals, likely including signaling components of auxin/ cytokinin and ABA. I also strongly suspect there will be involvement of CBF/DREB-like AP2 transcription factors and mi156 in the processes regulating or regulated by FT-controlled growth responses. The eventual characterization of these signaling networks and their interactions will provide us with powerful tools and targets to begin manipulating plant architecture for specific environments and purposes.

12. What do you think is the next “big thing” in plant biology?
I think the talk by Sanwen Huang at the most recent ASPB meeting pointed the direction toward the next “big thing” in plant biology—the power of association genetics from large-scale, multicultivar/species, sequencing projects. I think this approach will offer truly novel insights into the evolution of plants and point the way to loci (and the genes or other regulatory sequences within them) that control fundamental aspects of plant interaction with their environment and the developmental processes that allowed plants to adapt to various selective regimes (both natural and human-directed).

13. What are you reading these days?
Besides numerous journal articles, not much. However, I do take a break every year or so to read the next book in the Harry Dresden series by Jim Butcher.

14. What do you still have left to learn?
Everything I haven’t already and a good bit of what I have learned but have since forgotten. Like I tell my kids, “Knowledge is power, and power is good.”

Reference
Coming Together: The Plant Science Research Summit

Plant Scientists to Devise Consensus Plan to Guide Plant Science Research Over Next Decade

Novel storage organs for economically important plant-derived compounds, multiscale modeling of plant responses to environmental changes, management and analysis of large data sets, and the relationship between diversity and ecosystem function represent the range of the topics discussed at the Plant Science Research Summit held in late September at the Howard Hughes Medical Institute (HHMI) in Chevy Chase, Maryland.

More than 120 scientists from industry, government, and academia and representatives of various plant science stakeholder organizations including federal granting agencies came together in an effort led by ASPB to develop a consensus plan to invigorate and guide plant science research over the next 10 years. Summit participants were charged with identifying critical gaps in the understanding of plant science and articulating the research priorities that can positively impact grand challenges in areas such as health, energy, food, and environmental sustainability. In his opening remarks, Gary Stacey, the ASPB member who initiated the summit, called for the diverse group of participants to leave their personal research interests behind for the larger goal of generating innovative and forward-thinking ideas that federal granting agencies would support.

There was a clear sense at the summit that stakeholders in plant science research need to speak with a strong, unified voice, especially when considering the limited funds available. A striking example of the disparity between plant science research and biomedical research funding is that the National Institutes of Health spends more for research on individual diseases from schizophrenia to urologic diseases than the USDA allots for the entire Agriculture and Food Research Initiative (AFRI) competitive grants program.

A written report, expected to be completed in the spring of 2012, will focus on summarizing the grand challenges and priorities for the community and will be circulated widely to inform the science, policy, and funding processes. It is ASPB’s hope that the report will help federal and private funding agencies, the scientific community, plant-related industries, commodity groups, and other key stakeholders pursue a more coordinated research agenda that will span the entire discipline.

Highlighting the significance of this meeting, both Nature (http://bit.ly/pt0syi) and Science (http://bit.ly/nJCxzg) published news articles on the Plant Science Research Summit and the importance of identifying the grand challenges facing plant science research.

Despite the diversity of participants and wide ranging discussions at the summit, there was strong agreement on many of the major challenges facing plant science research; these consensus priorities will form the basis for the report.

However, coming together at the summit itself was simply the first step in the process. We ask that the entire plant science community—including all ASPB members—become engaged in the conversation. Please visit the Plant Science Research Summit website (http://www.aspb.org/plantsummit) for background papers, speaker presentations, and the opportunity to share your ideas and perspectives on the grand challenges facing plant science. We also urge you to spread the word to your colleagues, institutions, and associations to be sure that the entire plant science community has the chance to offer input into this collective effort. Just visit http://www.asp.org/plantsummit to join in the forum discussions or send your comments and suggestions to PlantSummit@aspb.org.

Funding from ASBP, HHMI, USDA, Department of Energy (DOE), and NSF supported the Plant Science Research Summit. HHMI, well known for its funding contributions to medical research, has taken a recent interest in plant science (http://bit.ly/jC7Qzn) and graciously provided its conference facilities for the summit.

Kathy R. Munkvold, PhD
ASPB Public Affairs Manager
kmunkvold@aspb.org
NSF Launches Career-Life Balance Initiative

At a White House event in September, the National Science Foundation (NSF) announced new workplace flexibility policies—its Career-Life Balance Initiative (http://bit.ly/p8xdM3). Women currently earn 41% of PhDs in science, technology, engineering, and mathematics (STEM) fields, but make up only 28% of tenure-track faculty in those fields. Reducing the dropout rate of women in STEM careers is especially important in the quest for gender equality because women in STEM jobs earn 33% more than those in non-STEM occupations, and the wage gap between men and women in STEM jobs is smaller than in other fields.

NSF has launched targeted workplace flexibility efforts in the past, but this new 10-year initiative is the first to be applied foundation-wide to help postdoctoral fellows and early-career faculty members more easily care for dependents while continuing their careers. It will

- **Allow postponement of grants for child birth/adoption:** Grant recipients can defer their awards for up to one year to care for their newborn or newly adopted children.
- **Allow grant suspension for parental leave:** Grant recipients who wish to suspend their grants to take parental leave can extend those grants by a comparable duration at no cost.
- **Provide supplements to cover research technicians:** Principal investigators (PIs) can apply for stipends to pay research technicians or equivalent staff to maintain labs while PIs are on family leave.
- **Publicize the availability of family-friendly opportunities:** NSF will issue announcements and revise current program solicitations to expressly promote these opportunities to eligible awardees.

- **Promote family friendliness for panel reviewers:** STEM researchers who review the grant proposals of their peers will have greater opportunities to conduct virtual reviews rather than travel to a central location, increasing flexibility and reducing dependent-care needs.
- **Support research and evaluation:** NSF will continue to encourage the submission of proposals for research that will assess the effectiveness of policies aimed at keeping women in the STEM pipeline.
- **Leverage and expand partnerships:** NSF will leverage existing relationships with academic institutions to encourage the extension of the tenure clock and allow for dual hiring opportunities.

“Too many young women scientists and engineers get sidetracked or drop their promising careers because they find it too difficult to balance the needs of those careers and the needs of their families,” said NSF Director Subra Suresh in a White House release. “This new initiative aims to change that, so that the country can benefit from the full range and diversity of its talent.”

**NSF Names New Head of Biological Sciences Directorate**

NSF has selected John C. Wingfield as the new head of its Directorate for Biological Sciences (BIO). Wingfield previously served as the director of BIO’s Division of Integrative Organismal Biology (IOS). He came to NSF in September 2010 from the University of California, Davis.

Wingfield’s research focuses on neural pathways for environmental signals affecting seasonality in birds and their mechanisms of coping with environmental stress. He also studies the interfaces with how animals deal with global climate change, endocrine disruption, and conservation biology. In a press release announcing the appointment, Wingfield said, “This is a transformational time for biological sciences in the post-genome era as we try to understand life on Earth from its most fundamental components at the molecular levels to functioning organisms interacting with their environment, and with each other, at ecosystem scales.”

Although Wingfield is not a plant scientist, the IOS division he led supports a significant amount of plant-related research including the Plant Genome Research Program.

**USAID Policy Framework Emphasizes Role of Science and Technology in Global Development**


Administrator Shah has made enhancing the use of science and technology to spur next-generation development a lynchpin of his reform agenda for the agency. This focus is clearly reflected throughout the Policy Framework, and the document makes repeated references to the need for USAID to expand its partnerships with outside entities, including universities, in its pursuit of new science and technology capabilities. More broadly, the document also lays out the case for continued American investment in global development at a time when foreign aid has come under intense pressure from some congressional Republicans in their efforts to reduce the debt and deficit. Despite emphasizing that foreign
aid constitutes less than 1% of the federal budget, USAID acknowledges the need to do more with less and will lean heavily on technological innovation to achieve its future goals.

The Policy Framework clarifies that USAID will continue to focus its limited resources on a number of policy initiatives articulated by President Obama, Secretary of State Hillary Rodham Clinton, and Administrator Shah early in their tenures. In particular, the Administration’s Feed the Future (FTF) global food security program and the Global Health Initiative (GHI) aimed at improving health across the developing world will remain priorities for USAID as the budgetary environment necessitates difficult choices.

While both initiatives create policy influence and funding opportunities for U.S. researchers, strong partnerships with local institutions in host countries are critical to success. FTF and GHI differ from previous development efforts by focusing on a limited set of target countries rather than seeking sweeping solutions applicable worldwide. FTF and GHI focus countries are selected based on a firm set of criteria, including the level of buy-in from local institutions that will build capacity to solidify USAID objectives following the end of agency support.

Beyond food security and global health, other ongoing USAID priorities identified in the Policy Framework include building resiliency to global climate change in developing countries, driving broad-based economic growth, supporting transitions to democracy, increasing preparedness to deal with natural and man-made disasters, and bringing innovative development approaches to fragile and conflict-affected states.

National Academies to Revisit Postdoctoral Experience
The National Academies will be revisiting its landmark report on Enhancing the Postdoctoral Experience of Scientists and Engineers (http://bit.ly/nxc12a). The report, released in 2000, played an important role in shining the light on the postdoctoral experience, which has, in turn, led to significant enhancements in the training of scientists.

According to its statement of task, the new project will describe the state of postdoctoral programs in the United States, examine how postdoctoral fellows (postdocs) are being guided and managed, review institutional practices with respect to postdocs, try to determine what happens to postdocs after they complete their programs, explore important changes that have occurred in the postdoc practices and in the research ecosystem, and assess how well current practices meet the needs of these fledgling scientists and engineers and of the research enterprise.

The study committee, which is chaired by Gregory A. Petsko of Brandeis University, will also attempt to answer several key questions, such as where postdocs are located, what expectations are for postdoctoral appointments, which career paths postdocs follow, and how postdocs participate in professional activities.

CGS and ETS Will Explore Pathways Through Graduate School and into Careers
The Council of Graduate Schools (CGS) and the Educational Testing Service (ETS) have convened a commission of academic and industry leaders to consider students’ pathways through graduate school and into careers (http://bit.ly/oqYROp). The need to develop a highly skilled workforce was first addressed in a 2010 report, The Path Forward: The Future of Graduate Education in the United States. That report argued that the nation’s future prosperity and ability to compete in the global marketplace depends on producing graduate degree holders prepared to address the challenges and opportunities of the 21st century. One major unmet need the report identified was that of understanding pathways through graduate school into the world of professional occupations.

The new commission will guide a research effort addressing issues such as graduate student knowledge of career options and how they learn about them, the role of graduate programs and faculty in informing and guiding students, and the career pathways that those with graduate degrees actually follow. The commission will also help create a national conversation about why understanding of these pathways is important.

The report from this effort is due to be released at CGS’s annual legislative conference in April 2012.

Selected Funding Opportunities
• NSF Developing Country Collaborations in Plant Genome Research awards provide supplements to Plant Genome Research Program awards to support collaborative research with scientists in developing countries (http://bit.ly/pZjTbc).
• NSF Science Across Virtual Institutes initiative promotes international collaboration of NSF-supported teams of researchers with counterparts abroad (http://bit.ly/pQnTIB).
• NSF Sustainable Energy Pathways program supports interdisciplinary research teams to look at energy pathways from source to consumption to impact (http://bit.ly/oVQkh).

To stay up-to-date on funding opportunities, see the Funding Opportunities in Plant Biology blog at http://www.aspb.org/fundingblog; e-mail subscription and RSS feed are available.

Adam P. Fagen, PhD
ASPB Public Affairs Director
Kathy R. Munkvold, PhD
ASPB Public Affairs Manager
kmunkvold@aspb.org
ASPB Summer Undergraduate Research Fellowship (SURF)
The 2012 SURF Application Opens December 1, 2011

The American Society of Plant Biologists (ASPB) Summer Undergraduate Research Fellowships (SURF) provides funds to promising undergraduate students so they can conduct meaningful research in plant biology during the early part of their college careers. SURF recipients are expected to present their research at ASPB’s annual Plant Biology meeting in the year following the fellowship award and research completion.

Eligibility
Application is open to all full-time undergraduate students in a degree-granting program. Students completing their second year are preferred, but well-prepared first- and third-year students who provide evidence of a strong interest in plant biology will be considered. Undergraduates needing more or less than the standard four years to earn a degree may still be eligible. International students or students following nontraditional academic calendars are welcome. SURF awards are limited to those without other sources of stipend or salary.

Faculty Mentors
Students must secure a mentor before submitting an application, and applicants must propose a research project to be pursued in the mentor’s laboratory. Mentors must be a member of ASPB, have an ongoing research program of high scientific merit, and demonstrate a commitment to undergraduate education and research. Students may work with a mentor at their own institution or at another institution. Mentors are expected to attend Plant Biology 2013 in Providence, Rhode Island, with the SURF student.

Application
A complete application will include a research project statement and personal statement from the student, a research and mentoring statement from the mentor, a letter of recommendation from another faculty member (not the mentor or in the mentor’s lab), and undergraduate transcript(s).

Selection Criteria
Competitive student applicants should have high academic achievement, strong motivation and skills for conducting research, and career objectives showing interest in or relevancy to plant biology. Reviewers also will consider the contribution of the project to the mentor’s research program, institutional commitment to the proposed research, and the mentor’s commitment to undergraduate research.

Successful applicants receive a $4,000 summer stipend, a one-year membership in ASPB, and $700 (paid to the mentor or institution) for materials and supplies. Each fellowship also provides support for student travel to Plant Biology 2013, ASPB’s annual meeting to be held July 20–24, 2013, in Providence, Rhode Island. These travel funds are automatically sent only to the 2012 SURF winners upon registering for the meeting and submitting an abstract about the SURF project to present at the meeting.

A successful SURF applicant’s sample timeline:

- **Contact potential mentors:** Now
- **Discuss research topics:** Now
- **Request a reference letter:** Now (from college/university faculty who is not the mentor)
- **Submit SURF application:** Several days ahead of the deadline, February 24, 2012
- **Look for emailed decisions:** By early March 2012
- **Conduct research:** Over 10 consecutive weeks when classes are not in session
- **Present research:** July 20–24 at Plant Biology 2013 in Providence, Rhode Island

Applications Accepted December 1, 2011 to February 24, 2011 (11:59 p.m. ET).

Questions? Need a Mentor?
Well in advance of applying, contact Katie Engen, ASPB education coordinator, at katie@aspb.org or 301-251-0560, ext. 116.

http://www.aspb.org/SURF
This year’s Education Workshop brought together program officers from the U.S. Department of Agriculture’s National Institute of Food and Agriculture (NIFA), U.S. National Science Foundation (NSF), and the Howard Hughes Medical Institute (HHMI), as well as principal investigators (PIs) whose projects were funded by these organizations, to share advice with conferees about preparing successful proposals.

Dr. Shing Kwok, a national program leader for NIFA, started the program by presenting information, including points of contact, for education-related USDA NIFA funding opportunities. He ended his presentation by offering “10 Tips for Successful Grantsmanship.” The audience especially appreciated his advice to “read the Request for Applications, and then read it again . . . two more times.”

Cynthia Bauerle, senior program officer for precollege and undergraduate science education at HHMI, offered four questions that investigators should address in their proposals to help maximize their success: What do you want to accomplish? How will you accomplish it? How will you know you have accomplished it? And, what can we learn from it? She emphasized that these questions can only be addressed successfully if investigators build on existing knowledge and research-based recommendations about science teaching and learning and include well-developed evaluation plans. Cynthia also pointed out a series of key reports that investigators should consider in developing their education and outreach programming. A bibliography that includes citations for these reports and other useful references about science education, as well as PowerPoint presentations from this session, are posted in the General Discussion Forum of the ASPB Higher Education Interest Group (http://bit.ly/qW0B8E).

Although Tony Beck, program officer of the NIH Science Education Partnership Award (SEPA) program (http://www.nccrsepa.org), was unable to attend the meeting, he sent information about the R25 funding mechanism that was presented during the workshop. R25 grants aim to recruit a diverse population of young people into careers in basic and clinical research. These awards support both formal and informal science education projects that are developed through partnerships between educational organizations such as K–12 schools, colleges and universities, and science centers and museums.

Terry Woodin, a program officer with NSF’s Division of Undergraduate Education, concluded the formal portion of the workshop by drawing parallels between characteristics of successful research proposals and successful education and outreach proposals. She seconded the other program officers’ comments about building on what is known about science teaching and learning and including well-developed evaluation plans.

The second half of the workshop was facilitated by PIs who had received funding from these programs, including Erin Dolan (University of Georgia), Laurie Fink (Science Museum of Minnesota), Danny Kaplan (Macalester College), Peggy Lemaux (University of California, Berkeley), Gloria Muday (Wake Forest University), David Salt (University of Aberdeen), Susan Singer (Carleton College), Sue Wick (University of Minnesota), and Paul Williams (University of Wisconsin–Madison). PIs met with conferees in small groups to share examples of successful and unsuccessful proposals and, in some cases, proposal reviews. Several PIs offered their own list of tips for learning to write successful proposals, including serving as a grant review panelist and collaborating with evaluators and education researchers. No formal

continued on page 28
presentation was made about the ASPB Education Foundation Grants Program (http://www.aspb.org/educationfoundation), but several PIs discussed their experiences seeking funding from the Education Foundation. For example, Peggy explained how she sought funding from the Education Foundation to support initial development and pilot testing as groundwork for seeking larger grants from NIFA and NSF.

Erin Dolan
Education Committee Chair
University of Georgia

10 Tips for Successful Grantsmanship

1. Read the Request for Applications (RFA) . . . then read it again two more times.
2. Call the National Program Leader (NPL) managing the program if you have any questions.
3. Serve on a panel.
4. Assemble an effective team and write the proposal together; define a role for each team member.
5. Set clear goals and objectives.
6. Write a meaningful and engaging project summary.
7. Write the proposal for reviewers.
8. Have a colleague review your proposal.
9. Proofread your proposal.
10. Submit early.

Provided by Shing Kwok
NIFA USDA

Field Trip to an Active Learning Classroom at the University of Minnesota

Has anyone else felt frustrated when trying to implement active learning exercises in traditional lecture halls? I certainly felt this disappointment when I co-taught a large introductory biology class in a standard classroom. That is why I contacted Sue Wick, University of Minnesota plant biology professor, to see about touring the newly designed Science Teaching and Student Services (STSS) classrooms on her campus that were built to embrace technology and group work in the classroom.

This idea to visit the STSS building with colleagues during Plant Biology 2011 (August 6–10) sprouted in my head one morning, but I had little clue how to actually materialize the field trip. Luckily, Roger Hangarter, an experienced leader in many aspects of ASPB’s initiatives including a term as Society president, directed me to Erin Dolan, chair of the ASPB Education Committee, and staff member Katie Engen. These two helped me schedule the trip, fund the transportation, and advertise the outing. It was surprisingly easy to organize the event with their help.

On Monday afternoon of the conference, I led a group of ASPB members as we piled into a van and traveled to the University of Minnesota’s new STSS building, which houses 15 active learning classrooms and two auditoriums. These classrooms are similar in design to the SCALE-UP (http://scaleup.ncsu.edu/) rooms that were pioneered at North Carolina State University. Sue demonstrated the features of this 21st-century learning environment and shared some of her experiences from teaching in the room.

When we first entered the classroom, many of us thought it looked and felt more like a teaching laboratory than a lecture hall. The room is cozy, yet spacious; it can hold 126 students. Instead of rows of chairs bolted to the floor, the room is organized into 14 round tables that each seat nine students. Each table is, in turn, divided into three “pods” of three students each. This room organization facilitates students working together in groups ranging in size from three to nine. Students are permanently assigned to tables and pods at the beginning of the class. Sue explained that tables with a seven-foot diameter are the best at giving all students enough working room while keeping them sufficiently close so they don’t need to shout across the table. The room has two very large flat screens on opposite ends and a large monitor near each of the 14 tables.

Students are provided laptops that plug into ports at the tables so they can project work on their computer screens to share with the class. In the center of the room, there is a small teacher station where instructors can connect their own computers and control all of the screens in the room.

When Sue teaches in this room, her primary aim is to help students complete activities designed to deepen their understanding of biology. During her Foundations in Biology classes, Sue does little formal lecturing in class meetings that are called

continued on page 30
It’s a Matter of 12 Principles

ASPB’s Bookmarks Go Viral and Get Updated, Translated, and Integrated

For about a decade, the ASPB Education Foundation has offered a set of 12 bookmarks that convey the 12 Principles of Plant Biology (http://www.aspb.org/12principles). These principles, identified by the Foundation, serve as a framework for many ASPB materials and as a reference for students, educators, and researchers.

Fulfilling bookmark orders placed minimal demands on the Society until August 2, 2011. On that date, the small, steady stream of orders burst into an overwhelming deluge. Why? Because ASPB—or more accurately, the free bookmark URL—went viral. Within 24 hours, ASPB received 1,700 orders for more than 68,000 bookmarks! Coincidentally, the ASPB staff was on its way to Minneapolis for Plant Biology 2011 as the requests flooded in. To avoid drowning in orders, we put a finger in the dike (a temporary hold) on the free bookmarks web page.

The order spreadsheet showed people wanting to use the bookmarks for homework, homeschooling, and classroom study, as well as to satisfy personal and professional interests. So after checking inventory and the postage budget, the Education Foundation board decided to fulfill all 1,700 orders. Some folks requested just one of a favorite bookmark; others asked for more than the 35-per-bookmark limit. As ever, ASPB complied with any size order once the source was verified as a valid educational entity (student, citizen-scientist, teacher, administrator, or group leader). Each package of bookmarks contained a thank you note including links to other free, downloadable ASPB resources as well as ASPB’s mission statement and easy options to donate in support of this mission.

Certainly, the “Great Bookmark Order Deluge of 2011” shows that plenty of folks from all walks of life are interested in plant biology. Going viral even provided ASPB with some informal market research—including the appeal of the word free. Additionally, many orders contained complimentary notes from individuals eager to use the bookmarks for specific reasons. This data supporting interest in the bookmarks was especially timely since the bookmarks themselves have been completely redesigned. The original bookmark created by ASPB member and former Education Committee chair Carole Reiss, effectively conveyed the 12 principles in a handy, portable format for use in educational settings everywhere. The updated designs, unveiled at Plant Biology 2011, use new crisp photographs and vivid colors to make the 12 principles and their key messages even more clear and enticing.

In addition to highlighting each principle, the new bookmarks also feature a concept related to the principle.

We expect the new versions of the bookmarks will fold seamlessly into the Society’s established routine of giving away many thousands of bookmarks (and related teaching materials) at large annual conferences such as the National Science Teachers Association, the National Association of Biology Teachers (NABT), and the ASPB Plant Biology meetings. Special requests from entities such as public libraries, zoos, botanical gardens, and school science departments for large orders of each bookmark will be honored as resources allow. And of course, the website offers free bookmarks, too.

Furthermore, ASPB is broadening the audience for the bookmarks by producing Spanish-language versions that match the new design for the English bookmarks. These señaladores para los 12 principios de la biología de las plantas were distributed for the first time at the NABT annual meeting in Anaheim, California, and we anticipate they will be

continued on page 30
especially useful to our Spanish-speaking members around the world.

Thanks to the on-going support from the ASPB Education Foundation, the English and Spanish bookmarks will continue to be printed, processed, and sent free of charge to anyone requesting them online and at outreach events. To prevent another overwhelming deluge of orders and keep costs down, we have capped the number of totally free orders each month. We will continue to prioritize orders for clear educational use. Anyone interested in supporting the bookmark program and other ASPB education initiatives can donate directly to the ASPB Education Foundation by using the green “donate” button on the Education Foundation page (http://www.aspbo.org/educationfoundation) of the website.

And so the bookmarks remain a small yet vital part of the ASPB outreach mission. ASPB also has begun planning how to align the 12 Principles of Plant Biology featured on the bookmarks with emerging standards and concepts such as those featured in the National Academies Conceptual Framework for New Science Education Standards (http://www7.nationalacademies.org/bose/Standards_Framework_Homepage.html) and recommendations from the recent Vision & Change report on undergraduate biology education (http://www.visionandchange.org).

Katie Engen
ASPB Education Foundation Coordinator
katie@aspb.org

Useful links for more information:
http://bit.ly/oGlW0m

• Article describing STSS building:

Principles continued from page 29

Field Trip continued from page 28

“concept labs.” Instead, she initiates and closely monitors students working through learning exercises, guiding them through active learning activities in the classroom. When she needs the attention of the entire class, she can use a portable microphone.

After leaving the STSS classroom, the field trip participants discussed concerns about students who don’t have access to high-tech, interactive classrooms. Then we recalled Sue’s insight that the most useful items in the room are the numerous white boards. Students are often at the white boards developing concepts maps, predicting genetic pathways, and drawing cellular structures. Most all of us can incorporate white boards or large memo boards into our current classrooms so that our students can interact with biological material more meaningfully.

Jessica Lucas
Indiana University
lucas8@indiana.edu

• Useful links for more information:
http://bit.ly/oGlW0m

• Article describing STSS building:
DC Teachers Night at the U.S. Botanic Garden
Cultivating Science Curricula in the Nation’s Capital

ASPB returned for the second time in September 2011 to the beautiful U.S. Botanic Garden (USBG) for another highly successful DC Teachers Night. Set amid the lush flora of the USBG, this two-hour science soiree with social trimmings (nibbles and drinks) introduced 200 teachers from across the wide spectrum of District of Columbia–based schools to scientists and outreach experts with resources to support environmental education. Feedback from prior events urged USBG and cohost D.C. Environmental Education Consortium (DCEEC) to move the fifth iteration of this annual event from February to September so that teachers had more time and flexibility to work the materials they discover at the event into their plans for the school year. Clearly, this change in schedule worked well. The USBG atrium and learning annexes were filled with a dynamic crowd of public, private, and charter school teachers eager to glean concepts and materials for their classrooms ranging from pre-kindergarten through advanced placement biology and in various extracurricular settings. While many presenters offered a wealth of information and even some exciting field trip options, ASPB was glad to be invited back specifically to present hands-on activities and instructional innovations.

DC Teachers Night is kept relatively small so that there is opportunity for teachers to explore each exhibit booth’s offerings and have extended and free-ranging conversations with booth representatives. For example, veteran ASPB volunteer Hemayet Ullah (Howard University) answered questions about plant pigments, pH analysis, and experimental design while demonstrating exercises from one of ASPB’s inquiry-based activities based on the 12 Principles of Plant Biology (http://www.aspb.org/12principles).

Also at the booth, ASPB Education Committee member George Ude (Bowie State University) and Gabi Yamoah, George’s student and experienced booth volunteer, helped teachers make Lilliputian garden cup necklaces with Mother of Thousands (MOT) plantlets (*Kalanchoe diagremontiana*). They encouraged teachers to think about how this simple activity can launch a series of sophisticated scientific inquiries on organized data collection, measurement techniques, increasing/inhibiting growth, and manipulating and/or tracking abiotic stressors. While the cup necklaces are offered in many ASPB booths, for DC Teachers Night we had additional materials and two variations of the MOT plant, all provided by Tom Bryan (University of Wisconsin–Madison).

At the far end of the ASPB table, staff member Katie Engen fielded an engaging plethora of challenges about teaching any given plant biology concept to students to students ranging from kindergarten children with autism to fifth graders in a setting with “no science budget” to high school students with “science smarts” but “shaky written communication skills.” Each teacher was appreciative and enthusiastic about these brainstorming sessions and left the booth eager to bring tailor-made lesson outlines and related sets of ASPB resources to their students and colleagues. Such resources included

- newly updated designs of the 12 principles (http://www.aspb.org/12principles) bookmarks and related activities (see related article on page 29)
- a CD of 12 lab protocols (http://www.aspb.org/12labs) for the 12 plant biology principles
- *Plant Clippings* (http://plantclippings.uark.edu), a video of plant science concepts presented in 10 silly-yet-serious short films on solving “plant crimes”

continued on page 32
information about acquiring a classroom science mentor and teaching modules from PlantingScience (http://www.plantingscience.org), an ASPB partner activity.

And of course, everyone took home a necklace with plantlets as a starting point for providing a full-grown MOT plant for their classroom so their students can conduct real scientific inquiry for weeks, months, and years to come.

ASPB appreciates the efforts of event organizers Lee Coykendall (USBG) and Kevin Schabow (DCEEC) to create this lively event and include us in it. It is one of many quality opportunities hosted by USBG with direction from Public Programs Manager Christine Flanagan, who also serves on the ASPB Education Foundation board of directors. Additionally, ASPB thanks its volunteers for their active participation (both in the booth and by supplying materials for it). It is only with such willing volunteer experts that ASPB outreach programs can succeed. Anyone interested in participating in an ASPB outreach event in the Washington area or around the country should contact Katie Engen.

Katie Engen
ASPB Education Foundation Coordinator
katie@aspb.org
Another Bumper Crop of Outreach Efforts

California Foundation for Agriculture in the Classroom Conference

On September 24, 2011, in Pomona, California, the California Foundation for Agriculture in the Classroom (CFAITC; http://www.cfaite.org) provided resources and strategies for educators, education volunteers, and school administrators to integrate agriculture into their K–12 curricula. Focusing on garden-based education and nutrition, the conference included a site tour of Cal State Polytechnic University’s AGRIspatches, a center to promote agricultural and environmental literacy; dynamic guest speakers such as former California Agriculture Secretary A. G. Kawamura; and a panel of southern California farmers and ranchers.

The teacher- and kid-friendly food, plant, and biotechnology activities and resources developed by Peggy Lemaux and Barbara Alonso (University of California, Berkeley) were featured among the various "Make 'n Take" tables, innovative workshops, and one-of-a-kind networking opportunities. These dynamic interactions provided an exciting framework for the promotion of agriculture in teaching a variety of subjects.

As with any exhibit hall booth, visitors can range from passersby who simply scan the banners to hunter-gatherers who select handouts (carefully or with generalized gusto) to focused seekers who engage with booth experts in meaningful conversations. ASPB is happy to support all levels of interest, but it is to the members of the latter group that we give particular attention—not because they "stick around" the longest, but because they show a clear and focused interest in incorporating plant science resources into their instruction plans. For the clearly engaged booth visitors, Peggy and Barbara created a USB drive with a wide variety of teaching resources for CFAITC attendees. They distributed 25 USB drives and added 36 people to their mailing list, satisfying numbers for a one-day event filled with many workshops and booths.

Attendees were excited that the materials were being offered on loan for free, especially the biotechnology-oriented display boards (http://ucbiotech.org/resources/display/displays.html). Most were not aware of their availability before this event, and several follow-up requests have been received. Attendees were appreciative of the fact that the materials were visually attractive and would hold students' interest. Information also was provided to high school teachers regarding the future availability of the NSF-funded afterschool Zombie Plague video game (http://pbge.ucdavis.edu/index.php?option=com_content&view=article&id=50&Itemid=135). Middle school teachers were more interested in the not-yet-completed companion curriculum, "Backyard Mystery."

Peggy and Barbara also presented their new game, "Who's In Your Family?" (http://ucbiotech.org/resources/games/index.html#Family), inspired by their "DNA for Dinner?" (http://ucbiotech.org/dnafordinner) afterschool curriculum. Game participants receive a paper bag containing puzzle pieces and mystery produce, which they must describe to help other participants guess what's in their bag. After produce is identified, each person tries to identify another fruit or vegetable "relative" in someone else's bag that belongs to the same family as theirs. Coded puzzle-piece cards in the bags help them in their search.

Barbara Alonso at the ucbiotech.org display table, which featured a variety of ASPB-sponsored resources.

Attendees immediately saw how they could use this activity as a springboard for additional discussions in their classrooms. Why are certain fruits and vegetables related? What are some modern technologies that can be used to determine relatedness? They also found additional activities in the "DNA for Dinner?" curriculum that could be tied to this activity—for example, the Fruit and Vegetable Word Search (http://ucbiotech.org/dnafordinner/lesson1/handout_1.3/index.html). Another suggestion was to divide classes into groups based on the families so students could find out more—such as how they grow, what parts are edible, and if they are nutritious.

What this taught Peggy and Barbara was that educators are very inventive! If you give them some high-quality resources, they will find a way to use them in their classrooms. And they are especially appreciative if they get to try them out, and they are available for them to use for free!
The ASPB Education Committee has named 12 science education mentors to be members of the 2011–2012 Master Plant Science Team (MPST). These mentors work to support PlantingScience (http://www.planting-science.org), an ASPB partner program.

PlantingScience is a learning and research resource that brings together middle and high school students, plant scientists, and teachers in a virtual environment. Students engage in hands-on plant investigations while working with peers at their schools and online with scientist mentors to build collaborations and enhance their understanding of plant science.

Mentors play a key role in this process. One category of mentor consists of graduate students and postdoctoral scholars active in all areas of plant science research. These mentors constitute an important part of PlantingScience’s Master Plant Science Team. MPST members have an abiding interest in helping middle and high school students and their classroom teachers to develop practical, insightful research skills while investigating the plant themes and teaching modules provided by the PlantingScience program (http://tinyurl.com/bumzq3z).

ASPB became an official partner in the PlantingScience project in 2006, and the first ASPB members participated as online scientist mentors that year. More recently, ASPB sponsored five MPST mentors during the 2007–2008 and 2008–2009 academic years; seven MPST mentors for 2009–2010; and six for the past academic year. ASPB has recently expanded its support of PlantingScience, enabling the Society to support up to 12 MPST members each year.

Congratulations to these 2011–2012 MPST mentors:
Veria Alvarado
Texas A&M University
Shajahan Anver
University of California, Davis
Elena J. Batista
Louisiana State University
Nathan Butler
Iowa State University
Erica A. Fishel
Washington University in St. Louis
Emily Merewitz
Rutgers University
Mona Monfared
University of California, Berkeley/USDA Plant Gene Expression Center
Christos Noutsos
Cold Spring Harbor Laboratory
Shayani Pieris
New Mexico Consortium
Marites Sales
University of Arkansas
Scott Schaeffer
Washington State University
Mon-Ray Shao
University of Nebraska–Lincoln, Center for Plant Science Innovation

Katie Engen
ASPB Education Foundation Coordinator
katie@aspb.org
Plant Biotechnology-Based Targeted Infusion Project at Howard University

Summer Workshop Inspires Underrepresented Groups to Pursue STEM Studies

Historically, interest and participation of underrepresented students in science, technology, engineering, and mathematics (STEM) education have been alarmingly low compared to other disciplines. This is equally true for the STEM subset of plant science. For example, at Howard University, one of the most prestigious minority-serving institutions, the vast majority of the almost 800 undergraduate biology majors opt for predetermined health-related programs, and they often display little interest in other scientific disciplines such as plant science.

To attract and retain underrepresented students in plant science, Howard University has recruited a team of noted plant biologists to offer the Howard Plant Biotechnology Summer Workshops (HPBSW) for underrepresented students just beginning college and high school science teachers serving minority students. I have developed the project plan, which is funded by the National Science Foundation (NSF) for this three-year HPBSW Targeted Infusion Project at Howard. I worked with two respected plant science educators and researchers, Heven Sze and Caren Chang from the University of Maryland, College Park. Heven and Caren provided extensive technical as well as academic support for the summer workshop.

The first HPBSW immersion program ran from July 5 to July 29, 2011 and was attended by a total of 14 participants, including 10 incoming Howard University students (four females and six males) and four Washington, D.C., area high/middle school science teachers (three women and one man). In addition to several plant biotechnology lab modules that were highly rated by the participants, we established an interactive website to deliver the lab and lecture modules, animations, surveys, and so on (http://www.howardbiolab.com).

The website has been an effective means to conduct both a wet lab and lecture-based workshop. The lab modules also will be available to students and teachers from diverse institutions on the workshop website, extending the impact of the program beyond Howard and the D.C. area.

Self-evaluation data indicated that the program’s four-week immersion format and the hands-on learning experiences made the HPBSW successful in meeting its objective of increasing the content knowledge and teacher development opportunities of the participating teachers. Students’ responses indicated increased knowledge in areas related to the benefits of plant biotechnology to producers and consumers, the impact of plant biotechnology in developing countries, the applications of plant biotechnology, molecular biology techniques, history of plant biotechnology, and current ethical issues related to plant biotechnology. Likewise, teachers’ responses reflected an increase in knowledge in varied areas including the role of reporter genes, processes of genetic manipulation to create beneficial traits, forms of abiotic stresses on plant life, range of biotechnological plants available commercially, benefits of plant biotechnology to consumers, risk factors associated with plant biotechnology, and current ethical issues related to plant biotechnology. Likewise, teachers’ responses reflected an increase in knowledge in varied areas including the role of reporter genes, processes of genetic manipulation to create beneficial traits, forms of abiotic stresses on plant life, range of biotechnological plants available commercially, benefits of plant biotechnology to consumers, risk factors associated with plant biotechnology, and current ethical issues related to plant biotechnology. Likewise, teachers’ responses reflected an increase in knowledge in varied areas including the role of reporter genes, processes of genetic manipulation to create beneficial traits, forms of abiotic stresses on plant life, range of biotechnological plants available commercially, benefits of plant biotechnology to consumers, risk factors associated with plant biotechnology, and current ethical issues related to plant biotechnology. Likewise, teachers’ responses reflected an increase in knowledge in varied areas including the role of reporter genes, processes of genetic manipulation to create beneficial traits, forms of abiotic stresses on plant life, range of biotechnological plants available commercially, benefits of plant biotechnology to consumers, risk factors associated with plant biotechnology, and current ethical issues related to plant biotechnology. Likewise, teachers’ responses reflected an increase in knowledge in varied areas including the role of reporter genes, processes of genetic manipulation to create beneficial traits, forms of abiotic stresses on plant life, range of biotechnological plants available commercially, benefits of plant biotechnology to consumers, risk factors associated with plant biotechnology, and current ethical issues related to plant biotechnology.

continued on page 36
ment regulatory agencies, and international laws and ethical issues related to biotechnology foods and crops.

While teachers generally reported a positive attitude toward the uses and applications of plant biotechnology prior to their participation in the program, students’ attitudes appeared to have been more notably impacted toward biotechnology following their participation in the program. More specifically, improved attitude was indicated in areas related to the benefits of plant biotechnology for people and the environment, the acceptability of engineering plants for medical purposes and for enhancing plants to fight disease and pests, and a willingness to purchase and use food produced through biotechnological methods.

Here are some of the participants’ overall impressions that highlight the program’s positive impact and its success in meeting its proposed objectives:

“This program convinced me that I must get my PhD and showed me that as an African American male, it is best that I stay in a STEM field….” (student participant)

“I don’t know if it was the specific activities, but in general, I am glad to have opened my mind to something I was previously clueless about. The thing I really liked is that it really got me thinking.” (student participant)

“Labs were fantastic, and I am already working to incorporate them into my classroom.” (teacher participant)

“The labs were very hands-on, and I learned new skills that will help me later.” (student participant)

The complete set of participant reflections is available on the program’s website (http://www.howardbiolab.com/default.aspx), along with lecture materials, 14 downloadable lab modules, workshop images, a program brochure to post, and other related links.

Hemayet Ullah
Howard University
hullah@howard.edu
Mary Williams (The Plant Cell) and I were invited to share ASPB’s education and outreach activities with the Scandinavian Plant Physiology Society (SPPS; http://www.spps.fi/cgi-bin/SPPS.pl) at their XXIV Congress in Stavanger, Norway, August 21–25. SPPS has members from Denmark, Finland, Sweden, and Norway, but more than half reside outside Scandinavia. Their international journal, Physiologia Plantarum, has been published since 1948.

The conference’s education session marked the establishment of the SPPS Education Committee with the mission “to be a platform for new and inspiring ways to communicate plant science to students.” SPPS Education Committee Chair Professor Lisbeth Jonsson from the Botany Department of Stockholm University described the mission, strategies, and possible activities of their newly formed group. Lisbeth noted that many of SPPS’s ideas came from ASPB educational material found online. She was very pleased and enthusiastic to have ASPB participate in their meeting, describe our material and logistics, and share freely. We expressed our support for SPPS’s activities, noting that we all have the same mission to communicate plant science to students, educators, and the public.

Carin Jarl-Sunesson, from the University of Lund in Sweden, and Tom Hamborg Nielsen, of the University of Copenhagen, presented examples of outreach activities at their universities for teachers and students. Following a question-and-answer period, attendees were welcome to take samples of ASPB educational materials. Of course, we had “garden cup necklaces” for them to make.

Mary Williams presented her popular and successful workshop, “How to Be a Great Teacher,” during the conference. This two-hour workshop was extremely well received. In fact, we were told that there were more potential registrants than the 30 or so available seats in the room.

In many informal settings during the conference, we were able to share ideas and ways to overcome obstacles. Lisbeth stated that SPPS plant educational outreach faces two problems that ASPB does not encounter. One is that their educational material needs to be available in at least four languages (Norwegian, Swedish, Finnish, and Danish). And it was interesting to discover that there are no “large-scale” professional development conferences in their countries for science or biology teachers; in fact, there are no equivalent science or biology teacher organizations such as our National Science Teachers Association and National Association of Biology Teachers. This means there is no venue to reach large numbers of science or biology teachers in any of the four Scandinavian countries. Therefore, the SPPS’s interest in disseminating quality science resources is particularly important.

Beyond the critical exchange of science education ideas and resources, we also had the opportunity to establish a very friendly professional network with many new international colleagues. For example, Lisbeth and local organizer Simon Geir Møller (University of Stavanger, Norway) welcomed Mary and me with open arms. We were invited to attend all conference events, presentations, and the official Congress Dinner at Flor Og Fjaere (literally, Flower & Eden; http://florogfjare.no/english#image-gallery). This island botanical garden paradise was a 20-minute ferry ride located in the fjords around Stavanger. The third-generation owners of Flor Og Fjaere have planted more than 50,000 flowers and other plants in their lush gardens. We were able to have a guided tour of these beautiful gardens before dinner, where we discussed many mutual interests related to the beautiful flora.

We would like to thank SPPS for their invitation and gracious hospitality during the conference. We feel that a strong bond has developed between the two societies, especially in the area of education and outreach.

Jane Ellis
Presbyterian College
jellis@mail.presby.edu
Clanton C. Black

Professor Clanton Candler Black, Jr., passed away on August 14, 2011, in Athens, Georgia.

Clanton was born on November 27, 1931, in Tampa, Florida. He grew up in Gainesville, Florida, married his Sunday school sweetheart Betty Dantzler, did his BSA degree (1953), served in the army for two years (1953–1955), earned his MSA (1957) and PhD in agronomy (1960) (“Some Effects of 2,4-Dichlorophenoxyacetic Acid on the Carbohydrate Metabolism of Etiolated Corn Seedlings” with Tom Humphreys) at the University of Florida in Gainesville, and did postdoctoral work at Cornell with Martin Gibbs (1960–1962) and at the Charles F. Kettering Research Foundation Laboratory in Yellow Springs, Ohio, with Tony San Pietro (1962–1963). From 1963 through 1967 he served as a staff scientist at the Kettering Foundation and as an assistant professor of biology at Antioch College. In 1967 he joined the biochemistry faculty at the University of Georgia in Athens where he taught, with the exception of three years when he chaired the Department of Botany, until the time of his death.

Clanton was fascinated by agronomy, the biochemistry of photosynthesis, teaching, and travel, and he combined those interests successfully into an exciting and rewarding career. Clanton was a true Southern gentleman. We are told that he ate everything served to him anywhere he traveled. He never lost his southern drawl: one wonders how he was understood outside of the southern United States. His research interests ranged from C_3, C_4, and CAM metabolism to photosynthetic phosphorylation, herbicides, ecophysiology, nitrogen, sulfur and calcium metabolism, photosynthesis, morphology, and plant yield. He sailed on two photosynthesis research expeditions to the Great Barrier Reef; worked on cold resistance in potatoes in Peru; and studied low-temperature photosynthesis in Antarctica, sugarcane in Hawaii, and rice in China. He participated in four C_4 photosynthesis expeditions to Uzbekistan and Russia and in five expeditions on global climate change and photosynthesis to Mongolia. He was a Fulbright Scholar in Tbilisi, Georgia, and Ulaanbaatar, Mongolia, and a guest professor at the Northeast Forestry University in Harbin, China.

Gerry Edwards credits Clanton with introducing him to photosynthetic carbon metabolism and C_4 photosynthesis. Nancy Carnal remembers Clanton’s lectures in which he transmitted to his students an historical view of the key advances in the field of photosynthesis peppered with stories of the controversies and arguments that eventually drove advances, and the personalities of research colleagues, all more instructive for what they subtly said about progress in science than for the particular detail. Gale Buchanan notes that even though Clanton’s research was oriented more to basic biology, he never lost his excitement in practical agriculture. Bill Outlaw remembers Clanton’s kindness to young people and recalls an occasion where Clanton (with humor) eased the anxiety of a first public speaking session, and that Clanton undertook personally to improve the situation of scientists around the world, in particular where resources were not abundant. One of us (SCH) also credits Clanton with providing the summer research opportunities that established a lifelong study of plant biochemistry, and many of us recall Clanton’s sage advice to “not let the grass grow under our feet.” He will be missed by all who had the privilege of knowing him.

Clanton was the consummate organizer. Immediately on reaching the Gibbs lab in Ithaca he organized a trip to Niagara Falls. It was Clanton who organized the surprise Gibbs 75th birthday bash and managed to find the cigar store Indian that Gibbs proudly displayed in his living room ever after. Gerry Edwards and Nancy Carnal remember fishing trips, and Jim Siedow remembers canoe trips from the headwaters of the Ogeeche River all the way to the Atlantic Ocean jointly with several southern labs.

Clanton served the scientific community in a number of ways. He served ASPB (then ASPP) as secretary, president, and an elected member of the Executive Committee. He served the Southern Section as...
Mary Musgrave

Mary E. (Musgrave) Blasiak, 57, died of cancer on August 11 at home in Greenfield, Massachusetts. She was born June 4, 1954, in Ithaca, New York, and was the daughter of Robert B. and Mildred (Scheer) Musgrave. Mary’s education included a BA from Cornell University in biological sciences and a PhD (1986) from Duke University in botany/cell and molecular biology, where she was an NIH Predoctoral Fellow and a James B. Duke Fellow.

Mary was a very creative and highly regarded research scientist who specialized in space biology, studying the effects of microgravity on developmental and physiological processes in plants. She was the first person to grow plants from seed-to-seed in space. As a NASA investigator and adviser to the Russian space program, she had projects on both the MIR international space station and the U.S. space shuttle.

Mary served on the governing board of the American Society of Gravitational and Space Biology (1994–1999) and as its president from 1996 to 1997, as well as editor of the Gravitational and Space Biology Bulletin from 1997 to 2011. She also held a number of prestigious appointments, including the Ad Hoc Panel for the Evaluation of NASA Life Sciences (1998); chair of NASA Life Sciences Advisory Subcommittee (1998–2004); member of the NASA Advanced Life Support Technical Working Group (2000–2003); and member of the NASA Biological and Physical Research Advisory Committee (2000–2004). She was a long-time member of ASPB and its Southern Section, as well as a member of the Crop Science Society of America, the Crucifer Genetics Cooperative, Sigma Xi, and Phi Beta Kappa.

Mary began her professional career as a postdoc working in space biology at Duke University. In 1987 she joined the faculty at Louisiana State University/LSU AgCenter (Baton Rouge), was promoted with tenure in 1991, and rose to the rank of professor in 1996. She served as associate dean in the College of Natural Sciences and Mathematics at the University of Massachusetts, Amherst, from 1999 to 2003. From there, she moved to the University of Connecticut, where she served as professor and head of the Department of Plant Science and Landscape Architecture until illness forced her to step down earlier this year.

Throughout her career, Mary was an inspiration to her peers, a mentor to her students, a teacher of scientists, and a graceful and resourceful administrator. Those closest to her remember Mary as “insatiably curious, fiendishly clever, a lover of first principles, taking delight in how things work, and carrying her enthusiasm for life into every aspect of her existence” (1). She also displayed a remarkably sophisticated sense of humor. As a scientist, Mary always remembered that biology ultimately rests upon an understanding of the organism within the context of its environment.

She is survived by her husband of 33 years, John Blasiak; two sons, Samuel Musgrave Blasiak of Greenfield and Robert Mikhail Blasiak of Nagoya, Japan; one brother, Robert B. Musgrave of Miami, Florida; two sisters, Martha Fellows of Canandaigua, New York, and Margaret Bennett of Fairbanks, Alaska; and numerous nieces and nephews.

Richard McAvoy
University of Connecticut
Jim Siedow
Duke University
Marc Cohn
Louisiana State University Agricultural Center

Reference

secretary–treasurer, chairman, and member of the Executive Committee. He served on a number of national and international committees and boards. From 1971 to 1981 he sat on the editorial board of Plant Physiology, and from 1980 to 1992 he was an associate editor. From 1978 to 1985 he was the feature editor of Weeds Today (the journal of the Weed Science Society of America) and a member of its editorial board. From 2005 to 2008 he served on the editorial board of the Mongolian Journal of Biological Sciences.

In 1974 he sat on the editorial board of the Iranian Journal of Agricultural Research. In 1979 he was vice chair, and in 1982 chair, of the Gordon Research Conference on Carbon Dioxide Fixation by Green Plants.

Clayton was a Fellow of ASPB and AAAS, received a Merit Award from the Botanical Society of America in 1981 for his significant contributions to our knowledge of the photosynthetic process, was a recipient of the Alex Laurie Award, and an Honor Member of the Russian Society of Plant Physiologists.
ASPB staff are dedicated to serving our members.
We welcome your questions and feedback.

For quick response, e-mail us at info@aspb.org or visit our FAQ at www.aspb.org/faq.