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Plant biologists join select group of top scientists.

ASPB News



THE NEWSLETTER OF THE AMERICAN SOCIETY OF PLANT BIOLOGISTS

Society “Hops to It” to Bring Plant Biology to 2012 Easter Egg Roll



First Lady Michelle Obama greets ASPB President Steve Huber at this year's White House Easter Egg Roll. See our story on page 32.

A New ASPB News

BY DAVID HORVATH
Chair, Membership Committee
david.horvath@ars.usda.gov

With this issue, the Membership Committee and staff are excited to introduce to you a new and improved *ASPB News*. A year or so ago, we conducted a survey of the membership to learn what you'd like to see more (and less) of in your Society's newsletter. In response, you'll find in these pages a brand new, full-color layout. We hope that over the coming months you will also note some of the steps we'll be taking to publish more articles that are of greater interest to you by enlisting the support of an editorial board of volunteer members from the United States and abroad to help seek out and vet news articles of interest. Please, if you know of any exciting news that you think might be of interest to other ASPB members, feel free to alert Nancy Winchester (nancyw@

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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.

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See You in Austin!

STEVE HUBER, ASPB PRESIDENT
schuber1@life.uiuc.edu

You won't want to miss this year's Plant Biology meeting! We will have an outstanding opportunity to come together in Austin to share results and soak up recent developments across plant biology. Although I enjoy small, specialized meetings, I also appreciate—and, frankly, benefit more from—meetings that allow me to catch up on the wide range of topics that can only be covered at a broad meeting such as Plant Biology. This year's symposia range from the molecular to the whole-plant level, and they cover both fundamental and translational aspects of plant biology research. I encourage each of you to come and contribute to the breadth and depth of science presented in Austin.

In addition to excellent science, this year's meeting also will have an expanded array of opportunities for networking and career development. These opportunities are described in detail elsewhere in this newsletter, but let me draw your attention to just a few of them.

Do you want to **grab one or two colleagues** you know and just sit and talk? The Austin Convention Center has lots of "conversation space" for people



Steve Huber

to meet in small groups. Do you want to **meet new people** working in areas of mutual interest? You can sign up to go with a group for a meal.

Thinking about **looking for that next job**, whether a postdoc or a permanent position? There are lots of different opportunities. Perhaps you would like to talk with someone working in a particular organization (e.g., PUI, government, or private sector) or engaged in a type of work you're not familiar with (such as science policy, science writing, marketing, and so on). Perhaps you also would like to

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Plant Biology 2012 doesn't just happen. It is the fruit of labors of many people led by Julia Bailey-Serres (ASPB secretary and chair of the Program Committee) and ASPB staff members Jean Rosenberg and Shoshana Kronfeld.



Jean Rosenberg
Director of Meetings,
Marketing, and Membership

Since coming to ASPB in 2004, Jean has worked to establish a group of skilled professionals to support ASPB's annual meeting and all its components. Jean is known in the meetings industry as a steward concerned about every facet of an attendee's participation. She really enjoys all the aspects of her multi-dimensional work at ASPB supporting membership and the journals. Both Jean and her husband are active in their communities, consummate "foodies," and art buffs; they like to think of themselves as "world citizens."



Shoshana Kronfeld
Membership Manger

Shoshana joined ASPB in March 2006 and since then has been heavily involved in supporting ASPB's annual meeting. Each year, she is the person you see almost 24/7 at the registration desk. Behind the scenes, she is responsible for managing all meeting registrations, abstract submissions, and our new mobile meeting app. In addition to Shoshana's meeting-related responsibilities, she is the primary contact for ASPB's members. Outside work, Shoshana likes to spend her time with her husband and two children. She particularly enjoys listening to her son play guitar, watching her daughter at ballet, and grabbing any spare moments that happen along to read a book or listen to music.

Plant Biology 2012 is all about cutting-edge science, networking, and career development.

PRESIDENT'S LETTER

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have someone look at your CV to make sure you are presenting yourself in the most effective manner? Well, you can do both at the same time in Austin! Sign up to meet during designated hours with representatives from different groups, and be sure

to take advantage of this new opportunity.

Maybe you are ready for your next career move and would like to apply for some open positions. If so, come to the Career Center Luncheon on Saturday, July 21, to post your CV and meet with representatives from companies and organizations with open positions.

Regardless of your particular career stage, perhaps you would like to continue expanding your horizons. Take advantage of career development workshops, organized by the Membership Committee and the Women in Plant Biology Committee, which will address jobs beyond academia and the challenge of maintaining life-work balance.

Plant Biology 2012 is all about cutting-edge science, networking, and career development. In addition, Austin is well known for its music, food, and nightlife. That combination sounds like a perfect recipe for work-life balance. I hope to see each of you in Austin! ■

A NEW ASPB NEWS

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aspb.org), Dr. Frank Dohleman (frank.g.dohleman@monsanto.com), or Rebecca Arundale (rarundal@uiuc.edu) with your ideas.

Additionally, we are refining the format of our old "Membership Corner" for those of you who wish to introduce themselves to the rest of our membership. The revamped column will ask fewer questions but encourage more in-depth responses. We will also be rotating the "Membership Corner" with a couple new columns. The first new addition will be student or postdoc interviews with

notable members of ASPB that we are simply calling "Luminaries." We hope you will be enlightened (pun intended) by the insights of these prominent plant biologists. We are currently depending on our ASPB graduate student and postdoc ambassadors to produce these articles, but any student or postdoc member is welcome to submit to me an idea for a 500- to 750-word interview they might like to conduct. I'll provide you with some guidelines you can use to help shape your interview. Just email me at david.horvath@ars.usda.gov, or go to (<http://www.aspb.org/newsletter/luminaries.cfm>).

Student/postdoc authors of interviews that are published will be given a \$50 Amazon gift card.

Another column we are working on is titled "Where Are They Now?" These articles will

look into the current activities of retired or emeritus members of ASPB. The column will

be produced by Dr. Elisabeth Gantt (University of Maryland).

We hope you will enjoy and be inspired by these new columns, and we welcome your feedback.

Finally, we have made

the electronic version of this newsletter accessible to anyone who visits the ASPB web page. Our hope is that by sharing our newsletter more freely, other plant biologists who read it will learn about all the great things ASPB does on behalf of plant science worldwide and perhaps even be inspired to join our ranks. So feel free to share the new and improved *ASPB News* widely.

One last note: a special thanks to Diane McCauley, *ASPB News* production manager (one of her several titles in the headquarters office), who did a fantastic job redesigning the newsletter. ■

Let us know what you think!

ASPB Announces 2012 Awards

Each year, ASPB honors excellence in research, education, outreach, and service through its numerous awards to those individuals who promote the mission of our Society. We are proud to announce this year's recipients.

Charles Albert Shull Award Elizabeth Ainsworth

Created in 1971 to recognize young researchers and to honor the Society's founding father and the first editor-in-chief of *Plant Physiology*, the 2012 Charles Albert Shull Award goes to Elizabeth (Lisa) Ainsworth

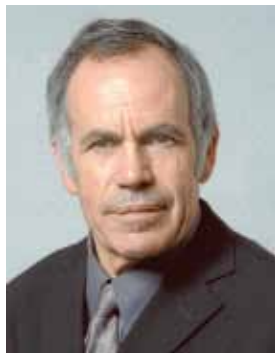


Lisa Ainsworth

(USDA/ARS plant molecular biologist/associate professor, University of Illinois, Urbana-Champaign) for her impressive scholarship that she also incorporates into her teaching and service. Lisa's pioneering research on current and potential impacts of global and environmental change on both natural and managed plant ecosystems is widely appreciated. Lisa will address the Society at the annual meeting in 2013.

Charles F. Kettering Award Stephen Long

Established in 1962 by an endowment from the Kettering Foundation, the Charles F. Kettering Award recognizes excellence in the field of photosynthesis. Stephen Long (University



Steve Long

of Illinois, Urbana-Champaign) has earned this year's award for his many seminal discoveries of the responses of photosynthesis to changes in the physical environment as well as the role of photosynthesis in mitigating climate change. Most recently, he and collaborators are developing plants as renewable sources of liquid fuel and addressing the social, economic, and ethical dimensions of allocating part of the food-producing landscape to the production of fuel.

Charles Reid Barnes Life Membership Award Andrew Hanson

The Charles Reid Barnes Life Membership Award, ASPB's oldest award, was established in

1925 and honors lifelong service in plant biology. This year's honoree is **Andrew Hanson** (University of Florida, Gainesville),



Andrew Hanson

who is recognized for his unique and multifaceted contributions to plant biology, his exemplary use of comparative genomics approaches to deepen our understanding of plant metabolic pathways, and his research in the areas of folate biosynthesis and biofortification.

Dennis R. Hoagland Award Mary Lou Guerinot

The 2012 Dennis R. Hoagland Award, which honors Hoagland's



Mary Lou Guerinot

contributions and leadership in plant mineral nutrition, is given to Mary Lou Guerinot (Dartmouth College) for her seminal contributions to the field of iron nutrition, work that has revolutionized our understanding of iron's uptake, long-distance transport, and distribution to subcellular compartments, as well as iron deficiency signaling pathways in plants.

Early Career Award Michael Nodine

Michael Nodine (Whitehead Institute for Biomedical Research), recipient of this year's Early Career Award, is recognized for his



Michael Nodine

exceptional contributions and creativity in plant embryogenesis and seed biology research, particularly with respect to the function of micro RNAs and the timing of the maternal-zygotic transition in plants.

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ASPB AWARDS

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Excellence in Education Award

Peggy Lemaux

This year's Excellence in Education Award goes to Peggy Lemaux (University of



Peggy Lemaux

California, Berkeley) for her outstanding contributions as a plant biology educator and educational leader and for her internationally known outreach program to promote a better public understanding of the benefits and risks of agricultural biotechnology. Peggy's ongoing activities allow consumers, farmers, public opinion leaders, and government officials to make informed decisions about biotechnology issues.

Lawrence Bogorad Award

Wolf Frommer

The Lawrence Bogorad Award is made biennially to a plant scientist whose work both illuminates the present and suggests paths to enlighten the future. This year's recipient, Wolf Frommer (Carnegie Institution of Washington), is recognized for his major



Wolf Frommer

contributions in the development of fundamental tools and technologies essential for breakthrough discoveries that advance our understanding of glucose, sucrose, ammonium, amino acid, and nucleotide transport in plants.

Robert Rabson Award

Yuki Tobimatsu

For his exceptional hard work, thoughtful independent analysis, and effective collaborations in the areas of lignin biosynthesis and cell wall biochemistry,



Yuki Tobimatsu

Yuki Tobimatsu (University of Wisconsin-Madison) is the winner of the first Robert Rabson Award. This award recognizes Bob Rabson's steadfast advocacy for plant biology through the creation of funding

programs in the Department of Energy for research in basic energy sciences.

ASPB-Pioneer Hi-Bred International Graduate Student Fellowship

Jessica Rutkoski

The ASPB-Pioneer Hi-Bred International Graduate Student Fellowship, made possible by the generosity of Pioneer Hi-Bred International, supports innovative graduate work in areas of plant biology that relate to important commodity crops.



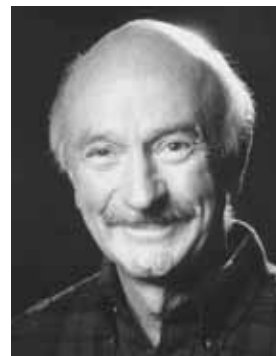
Jessica Rutkoski

Jessica Rutkoski (Cornell University) is the 2012 recipient of this award. Jessica is a PhD student in the plant breeding graduate program at Cornell University in Mark Sorrells's laboratory. Her dissertation research focuses on stem rust in wheat, a devastating disease caused by the pathogen *Puccinia graminis*. Jessica's goal is to develop wheat varieties with quantitative resistance to stem rust, which could potentially be much more durable than single-gene resistance.

Stephen Hales Prize

Ian Sussex

Ian Sussex (Yale University) is the 2012 recipient of the Stephen Hales Prize. This



Ian Sussex

award honors the Reverend Stephen Hales for his pioneering work published in his 1727 book *Vegetable Staticks*. Ian is recognized for more than 60 years of outstanding seminal contributions to diverse areas of plant development research. He is particularly esteemed for his work on embryo lethal mutants in *Arabidopsis thaliana*, which helped convince plant researchers that Arabidopsis is a great model organism.

Corresponding Member

Agepati Srinivasa Raghavendra and Frank Gubler

Corresponding Member status is conferred by election on the annual ballot. This honor, initially given in 1932, provides life membership and Society publications to distinguished plant biologists from outside the United States.

Agepati Srinivasa Raghavendra (University of Hyderabad, India) is nominated for pioneering



Agepati Srinivasa Raghavendra

work in photosynthetic carbon metabolism and stomatal guard cell function. Agepati also has introduced innovative techniques for the rapid isolation of highly active mesophyll protoplasts from pea and *Arabidopsis*, monitoring cytosolic pH by fluorescent dyes, and developing a reconstituted system of isolated mitochondria and peroxisomes.

Frank Gubler (CSIRO Plant Industry, Canberra, Australia) is nominated for his many years of groundbreaking research in cereal grain



Frank Gubler

biology. He has made a number of seminal contributions that have significantly advanced our understanding of protein secretion pathways in plants, hormonal signaling and regulation of gene expression, and

molecular mechanisms that regulate grain germination and dormancy in cereals.

2012 Fellows of ASPB

Established in 2007 and granted to no more than 0.2% of the current membership, the Fellow of ASPB Award may be given in recognition of distinguished and long-term contributions to plant biology and service to the Society by current members in areas that include research, education, mentoring, outreach, and professional and public service. Current members of ASPB who have contributed to the Society for at least 10 years are eligible for nomination.

Judy Callis
University of California, Davis



Judy Callis

Judy is recognized for her research on the ubiquitin-dependent proteolytic pathway in plants. Her research on the E3 ligase and ubiquitin-like proteins has provided the foundation for understanding the connection between hormones and protein turnover in regulating plant growth and development. Judy also has served ASPB in many roles. She was a member of the Publications Committee

(1994–1999; chair, 1997–1998), Executive Committee (1997–1998 and 2009–2011), ad hoc Website Committee (1996–1997), Corresponding Member Award Committee (2003–2007), Program Committee (2006–2013; chair and secretary, 2009–2011), and the Eric E. Conn Young Investigator Award Selection Committee (2011–2014). She has served as monitoring editor (2000–2006) and associate editor (2002–2008) for *Plant Physiology* and coeditor for *The Plant Cell* (2009–2014).

Karen Koch
University of Florida



Karen Koch

Karen is recognized for her research on carbon metabolism and the effects of sugars on gene expression. Her “feast and famine” framework for regulating the expression of genes involved in sugar metabolism forms the basis for understanding the responses of plant organs to sugar signaling to optimize resource allocation. Karen has served ASPB as an elected member of the Executive Committee (2005–2008); as chair of the Women in Plant Biology Committee (1994–1997); and as a member

of the Membership Committee (1995–1997), Advanced Textbook Development Committee (2002), and Corresponding Member Award Committee (2011–2015). She also served on the editorial board of *Plant Physiology* (1987–1993).

Danny Schnell
University of Massachusetts Amherst



Danny Schnell

Danny is recognized for his research on the TOC and TIC translocons, complex protein targeting pathways that specifically recognize and import nuclear encoded proteins into the chloroplast. In addition to his extensive research on the TOC–TIC system and the regulation of plastid–nuclear communication, Danny has served ASPB in many ways. He has been a member and chair of the Program Committee (1998–2001; 2007–2011; chair and secretary, 2007–2009), a member of the Executive Committee (2001–2003; 2007–2009) and the Board of Trustees (2004–2007; 2010–2013; chair, 2006–2007), and a monitoring editor of *Plant Physiology* (2002–2007).

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ASPB AWARDS

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Elizabeth Vierling

University of Massachusetts
Amherst

Elizabeth is internationally recognized for her research on plant chaperones. Her work has focused on the structure and function of the family of small heat shock proteins and the



Elizabeth Vierling

HSP100 family of chaperones and their functional mechanisms associated with heat stress and thermal tolerance in plants. Elizabeth has served ASPB as a monitoring editor for *Plant Physiology* (1992–1995), as an elected member of the Executive Committee (1994–1997), and as a member of the Charles Albert Shull Award Committee (2005–2008) and the ASPB–Pioneer Hi-Bred Graduate Student Fellowship Committee (2009–2012).

Eleanore Wurtzel

Lehman College, The City
University of New York

Eleanore is recognized for her research on carotenoid biosynthesis. Her work has contributed to the understanding of the processes regulating carotenoid



Eleanore Wurtzel

accumulation in cereal crops, primarily maize. As a member of the ASPB Minority Affairs Committee (2004–2010), Eleanore initiated and developed the Diversity Bank, which serves as a mechanism for ASPB members to link and interact with underrepresented minority students and faculty through research collaborations and seminars. She also was a key member of the team that wrote a grant to the NSF to support ASPB efforts to mentor and train underrepresented minority students. She also has served ASPB as a monitoring editor of *Plant Physiology* (2008–2012). ■

What does it take
to get students
interested in careers
in science?

YOUR involvement!

The ASPB Minority Affairs Committee (MAC) has funds to support your outreach activities at Minority Serving Institutions (MSIs). MAC is seeking ASPB members to participate in this outreach activity either by hosting a visitor or by visiting an MSI. During the visit, the guest will interact with students, present an exciting research seminar, and serve as an ASPB advocate. MAC encourages you to reach out to the next generation of plant biologists. We have funds from NSF and from the Society to support your visit. Send an e-mail to us at slee@aspb.org to obtain a short application, and we'll help you take care of the rest. Meanwhile, check out ASPB's Broadening Participation Group (<http://my.aspb.org/members/group.aspx?id=67860>), which supports the community's engagement in outreach.

Join us in expanding
ASPB's outreach efforts!

ASPB's 2012 Women's Young Investigator Travel Award Winners Announced

Each year, ASPB awards travel grants to early career women investigators through a competitive process to attend the Plant Biology annual meeting. The goal of the Women's Young Investigator Travel Award (WYITA) program is to increase attendance of female investigators in their first five years as an independent scientist in academia, industry, or government at the annual meeting by providing travel funds. Selection is based on (1) the science and quality of the abstract submitted relative to the amount of time as a young investigator, (2) a statement describing why travel should be supported, and (3) financial need.

Seven women were selected this year, and each will receive a \$1,000 award to attend the Plant Biology annual meeting in Austin, Texas. A list of the recipients and their abstract titles follows.



Jane Geisler-Lee



Susanne Hoffmann-Benning



Yan Lu



Mautusi Mitra



Karolina Mukhtar



Allison Phillips



Rebecca Silady

Jane Geisler-Lee

Southern Illinois University
Carbondale

"Phytotoxicity, accumulation and transport of silver nanoparticles by *Arabidopsis thaliana*"

Susanne Hoffmann-Benning

Michigan State University

"New aspects of phloem-mediated long-distance lipid signaling in plants"

Yan Lu

Western Michigan University

"Novel transcriptional regulation of biosynthesis of aspartate-derived amino acids"

Mautusi Mitra

University of West Georgia

"Employing functional genomics to study the regulation of tetrapyrrole metabolism in the green microalga *Chlamydomonas reinhardtii*"

Karolina Mukhtar

University of Alabama at
Birmingham

"Functions of secretory pathways and endoplasmic reticulum stress in plant immunity"

Allison Phillips

Wisconsin Lutheran College

"Analysis of *stunter1*, a maize mutant with reduced gametophyte size and maternal effects on seed development"

Rebecca Silady

Southern Connecticut State
University

"*grv2*, an embryo defective mutant, functions in the late endocytic pathway"

Congratulations to each of the 2012 WYITA winners. ■

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We Look Forward to Seeing You at Plant Biology 2012 in Austin, July 20–24!

Take a look at just some of the features and highlights we have planned for you!

New This Year! Career Center Lunch

(FREE FOR ALL ATTENDEES)

This year we are offering a Career Center Lunch on Saturday, July 21. It is free for all attendees, but you must preregister. Check out the job boards, post your resume, chat with leaders in the field, and meet with companies that have current openings—all in the exhibit hall. Reserve your ticket for this event when you register for Plant Biology 2012 or after you register at the online store (<https://aspb.site-ym.com/store/default.asp>).

Many Workshops and Events to Attend

When you register for Plant Biology 2012, don't forget to preregister for your tickets to the many workshops and special events scheduled. Many of them are free, but all of them require a ticket. If you already registered, don't fret—you can still get your tickets by going to the online store <https://aspb.site-ym.com/store/default.asp>. Don't delay! Most events have limited seating and may sell out.

Minisymposia Speakers Announced

Minisymposia speakers have been selected and confirmed. You can look for their abstracts at <http://tinyurl.com/ccl46fg>.

The search function allows you to create an itinerary of abstracts that you want to make sure to check out while in Austin. Start planning now and stay organized so that you don't miss anything important to you!

On-site Child Care

ASPB is happy to announce that this year there will be low-cost, on-site child care for children under 13 years of age whose parents are attending Plant Biology 2012. Discounts are provided to ASPB members and those with multiple children. Go to http://aspb.site-ym.com/resource/resmgr/docs/2012_childcare_fees.pdf to view the fee structure. Register your child today!

Child care is subsidized by the Women in Plant Biology Committee via a fund bequeathed by Eli Romanoff.



For a preliminary schedule and list of symposia, go to

<http://austin2012.aspb.org>

Your Boots Are Made for Walking!

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1. Convention Center
Attend symposia for great science, and meet friends!
★ parking

2. Hilton Austin
Home of the \$4 beer and ASPB's headquarters hotel

3. Courtyard Marriott
Student housing

4. Hilton Garden Inn
ASPB housing

5. Hamburger Hut
(Enjoy a veggie burger)

6. Entertainment District
Heart of the Live Music Capital of the World®

7. The Hike-and-Bike Trail
Great place for a morning run, taking a break, or an evening ride

8. Trailer Park Eatery
Home to Austin's famous food trucks and the best priced places in Austin

9. South Congress Avenue
Shops, restaurants, and all that keeps Austin eclectic and funky

Make your plans now and register at <http://austin2012.aspb.org>.

Welcome to Austin!

Live Music Capital of the World®

Music is a must in Austin, and you don't have to work hard to find it. Just step out of your hotel and you'll hear the sounds of the famous 6th Street, where music emanates from every door. The clubs to pay special attention to are Antone's, Stubb's, the Elephant Room, and the Saxon Pub. Alternatively, you can stroll through the downtown entertainment districts—the entire area is compact enough to walk through easily.

But music isn't the only "must do" in Austin, so here are a few tips from the 2012 online edition of *Frommer's Travel Austin Guide*.



PHOTO BY ANDY SCHRADER

Pedi-Cabs

You can walk all the neighborhoods of the city, but on a hot summer day, you might want to jump in a pedi-cab to give your feet a break. Pedi-cab drivers operate on a donation-only basis, so tip them according to service.

Food

Austin offers restaurants on wheels (known as food trucks) and is also the original home of Whole Foods Market (a true sightseeing experience!). If you are staying at one of the Plant Biology 2012 Marriott properties, Whole Foods will deliver to your door. Walk up South Congress to South Congress Café, a popular brunch spot where you can enjoy a local favorite—*migas* (eggs cooked with chopped tomato, onion, chili, and tortilla bits)—or try something out of the ordinary, such as the wild boar *pozole* (Mexican-style hominy stew).



Evening Bat Flight

When the largest urban bat colony in North America takes wing from under downtown's Congress Avenue Bridge, it's an impressive act of nature. Call the Bat Hotline (512-416-5700, ext. 3636) for the daily estimated flight time. If you arrive early, get a space on the east side of the bridge close to the southern bank of Town Lake. You should also check out the information module set up by Bat Conservation International; it explains the habits and life of a bat colony.



© DAN HERRON

Hike-and-Bike Trail

Try a leisurely stroll along the hike-and-bike trail (unless you're a late riser, in which case you should probably just move on to another activity to avoid the heat and crowds). One of the most attractive sections of the path is the loop from Congress Avenue west to the pedestrian bridge next to the Lamar Bridge.



For more information, check out <http://www.frommers.com/destinations/austin>.



The subcommittee's witnesses included (from left) Fred Dylla, Elliott Maxwell, Crispin Taylor, Stuart Shieber, and Scott Plutchak.

ASPB Executive Director Crispin Taylor Testifies at House Hearing on Public Access to Scholarly Publications

On March 29, ASPB Executive Director Crispin Taylor testified before the U.S. House of Representatives, Committee on Science, Space, and Technology; Subcommittee on Investigations and Oversight on the topic of *Federally Funded Research: Examining Public Access and Scholarly Publication Interests*.

Consistent with ASPB's response (<http://tinyurl.com/c7yvqre>) earlier this year to an Office of Science and Technology Policy (OSTP) request for information on similar topics, Crispin argued that the government should adopt sensible, flexible, and cautious approaches to drafting and revising public access policies or

regulations. These approaches should engage all concerned parties, including federal agencies, scientists, university administrators, librarians, publishers, and the public, and should foster innovation and collaboration. Policies should focus on providing access to the definitive version of an article, which is typically hosted on the publisher's website; developing robust metadata standards; and ensuring increased interoperability among journal articles and other valuable sources of information online. Policies should also recognize and embrace the global nature of scientific research and scholarly publishing. Crispin further testified that government

mandates that specify business models or embargo periods are detrimental to collaborative progress toward improved access to and utility of scholarly information online. The full written testimony can be found at <http://tinyurl.com/cjvoujf>.

Other witnesses at the hearing included H. Frederick Dylla, executive director and CEO of the American Institute of Physics; Elliot Maxwell, project director for the Digital Connections Council at the Committee on Economic Development; Stuart Shieber, director for scholarly communications at Harvard University; and Scott Plutchak, director of the Lister Hill Library at the University of Alabama at Birmingham.

Taylor, Dylla, and Plutchak all served on the 2009 Scholarly Publishing Roundtable, which was set up by the forerunner of the House Science, Space, and Technology Committee during the previous Congress. Language derived from the roundtable's report that encourages a collaborative approach toward increasing public access is included in Section 103 of the American COMPETES Reauthorization Act of 2010.

The hearing opened with the chair and ranking member each giving opening statements, both of which were balanced in scope and expressed concern regarding the potential impact of legislation like the Federal Research Public Access Act (FRPAA) on scholarly publishers and copyright. Nevertheless, both statements also pointed to a public interest in the outputs of research funded by the government. These opening statements were followed by oral testimony from each of the five witnesses, following which chairman Paul Broun (R-GA), ranking member Paul Tonko (D-NY), and subcommittee member Zoe Lofgren (D-CA) asked a series of questions of the witnesses. In these exchanges, Crispin made additional points regarding the adverse impacts of federal mandates on publishers such as ASPB, and he was joined by Plutchak and Dylla in arguing that the collaborative approach toward broadening public access as envisioned in COMPETES ought to be allowed to play out.

Despite her enthusiasm for public access mandates, Rep. Lofgren also appeared to have a good sense of the importance and value of scholarly societies to the progress of scholarship,

and she expressed concern at the possibility that congressional actions might cause such organizations any harm.

After three rounds of questions, the hearing concluded and the witnesses were dismissed. Chairman Broun's closing statement made it clear that he feels the House Science, Space, and Technology Committee—and the Investigations and Oversight Committee in particular—should be closely involved in any subsequent congressional deliberations or actions regarding scholarly communication.

For more information on the hearing, including other public witnesses and a link to the archived webcast, please see the following website: <http://tinyurl.com/7smlojh>. The official press release from the hearing can be viewed at <http://tinyurl.com/c6zam7b>. Post-hearing coverage was published in *The Chronicle of Higher Education* (see <http://tinyurl.com/c5h9abm>) and *Science* (see <http://tinyurl.com/crglbq5>). ■



Photo by Stephen Brashear/AP, © HHMI.

Keiko Torii Named Next Editor of *The Arabidopsis Book*

TAB Provides Free Access to Peer-Reviewed Articles on Key Plant Model Organism

ASPB has appointed Keiko Torii as the next editor-in-chief of *The Arabidopsis Book* (TAB). She succeeds Rob Last of Michigan State University.

TAB is a free access, peer-reviewed serial publication launched by ASPB in 2002 under the direction of plant biologists Chris Somerville and Elliot Meyerowitz as a new model for communicating up-to-date and comprehensive information about a broad range of topics in research on *Arabidopsis thaliana*

and related species. New articles are published as fields evolve, and older content is substantively revised on an ongoing basis. There are currently more than 100 TAB chapters freely available at <http://bit.ly/TheArabidopsisBook>.

Keiko is distinguished professor of biology at the University of Washington and was recently selected as an HHMI-GBMF Investigator by the Howard Hughes Medical Institute and the Gordon and Betty Moore Foundation. She is currently

a monitoring editor for *Plant Physiology* and a mentor for ASPB's Summer Undergraduate Research Fellowship program.

Keiko studies how plant cells interact to establish functional patterns during development. She was among the first to discover a role for receptor kinases in plant growth and development. Through the analysis of ERECTA-family receptor kinase mutants, Keiko further revealed that this family of receptor kinases regulates patterning and differentiation of stomata, small pores on the plant surface for efficient gas exchange. She played a key role in further identification of peptide signaling ligands and “master regulatory” transcription factors specifying stomatal development. She is now working across disciplines to understand the regulatory dynamics and signaling pathways that create stomatal patterns. Greater understanding of this process can help predict how plants will cope with changing climates, including droughts and other environmental challenges.

Each TAB article provides a scholarly and authoritative overview of the state of knowledge about the topic being covered, generally including hyperlinks to long-lived web resources to facilitate reader access to information about genes, datasets, and other key references. ■

Members in the News

Guiliang Tang's work on small RNAs was featured in an article on the science news website *Science Daily* (<http://www.sciencedaily.com/releases/2012/03/120301143756.htm>). Recently, small RNAs have constituted one of the hottest areas of plant biology research. These tiny fragments of RNA are often responsible for modulating the expression of genes important for basic plant functions, such as growth and development. However, determining the role of individual small RNAs has not been easy. Fortunately, Guiliang, associate professor at Michigan Technological University, and his laboratory have added another tool to the toolbox for assessing small RNA function in plants. Small tandem target mimics (STTMs) disrupt the actions of small RNAs by binding their small RNA targets, eventually leading to the destruction of those targets. By analyzing the responses of plants expressing STTMs, researchers can learn more about a particular small RNA's function.

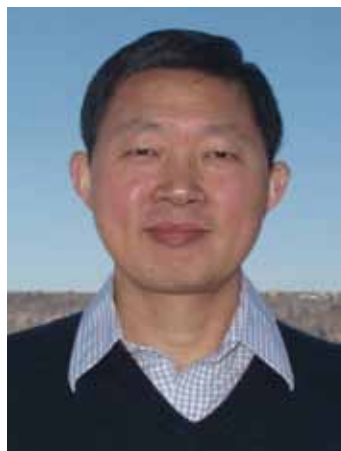
The *Science Daily* article highlights the usefulness of Guiliang's approach, originally published in *The Plant Cell* (<http://dx.doi.org/10.1105/tpc.111.094144>), citing the method's flexibility. In the article, Guiliang states, "You can use this to study the function of any small RNA in the cell." Furthermore, the method allows for the simultaneous analysis of related members of a small

RNA family, making this a very powerful tool.

Jonathan Jones, a senior scientist at the Sainsbury Laboratory in Norwich, England, spoke on the safety of genetically engineered crops in a recent news article in the March 6 edition of *The Washington Post*, stating, "If you have a plant with 30,000 genes, and you add another, you have a plant that is 99.999% identical. It's very unlikely that would make a difference for human health."

In an article titled "How Scientists Manipulate the Genetics of Crops" (<http://bit.ly/yuZQzg>), Jonathan Jones provides an overview of the process of genetically engineering a crop of interest, from identifying useful genes to modify, disable, or insert into the crop genome to testing for the modification in the genome and that the modified plant is safe. Jonathan has long been an advocate for the benefits of genetically engineered crops; his opinion pieces on the subject have been published in the *Guardian* (<http://www.guardian.co.uk/environment/2011/jul/21/gm-debate>) and by *BBC News* (<http://news.bbc.co.uk/2/hi/8789279.stm>).

Jonathan's research focuses on the molecular and genetic mechanisms of disease resistance and pathogen virulence in plants. His outstanding contributions to the field of plant pathology were recently recognized with the 2012 E. C.



Guiliang Tang



Jonathan Jones

Stakman Award, presented by the University of Minnesota, Department of Plant Pathology. As an ASPB member, Jonathan has also served as a coeditor of *The Plant Cell*.

Cathie Martin was recently featured in a *Guardian* article (<http://www.guardian.co.uk/environment/2012/mar/13/gm-food-genetically-modified-obesity>) on genetically engineering food for enhanced health benefits. Cathie's recent work on blood oranges, a fruit requiring specific periods of cold exposure during fruit development or post harvest for production of beneficial anthocyanin pigments, has revealed a gene called *Ruby* that regulates this cold dependency. Removing the cold dependency of this gene opens up the possibility for cultivating blood oranges in warmer climates and expanding the reach of the health benefits they confer. In a press release, Cathie stated, "We are now experimenting with hooking the *Ruby* gene up with a specific fruit promoter so it can be induced in another way."



Cathie Martin

However, regulatory restrictions create a barrier for moving genetically engineered blood orange varieties from the laboratory to the marketplace. Cathie mentions that "there are enormous problems in creating something that can be grown in Europe, and big problems in public funding, because of the regulation."

Cathie is a group leader at the John Innes Center and a professor at the University of East Anglia in the United Kingdom. She currently serves as editor-in-chief of *The Plant Cell*. ■

Antonius and Marjori Matzke to Join IPMB

BY TONY HUANG and TUAN-HUA DAVID HO

Antonius and Marjori Matzke (Austrian Academy of Sciences, Vienna), outstanding scholars in epigenetics, gene silencing, and nuclear membrane transport, will join the Institute of Plant and Microbial Biology (IPMB), Academia Sinica, Taipei, as distinguished research fellows in fall 2012. The Matzkes' full-time engagement at IPMB will substantially advance the activi-

ties of the institute in becoming internationally renowned.

IPMB has world-class core facilities of microscopy, bioinformatics, proteomics, and metabolomics, which are staffed with PhD-level specialists. Several senior researchers around the world have joined the faculty, including Tuan-hua David Ho (former ASPB president; Washington University, St. Louis) and Anthony Huang

(University of California, Riverside). IPMB's 30-member faculty has youth and energy—more than half joined the institute as new principal investigators during the past decade. IPMB has attracted faculty from the United States, Germany, Japan, and now Austria.

The faculty routinely publishes in mainstream, high-impact journals, including *The Plant Cell*, *Plant Physiology*,

Journal of Biological Chemistry, *PNAS*, and *Journal of Cell Biology*. The institute has an international PhD program with students from within Taiwan and around the world, and it also trains postdoctoral fellows. The IPMB website is <http://ipmb.sinica.edu.tw>. ■

ASPB Members Elected to National Academy of Sciences

Plant biologists join select group of top scientists

Several members of ASPB have been elected as members or foreign associates of the U.S. National Academy of Sciences (NAS) in recognition of their distinguished and continuing achievements in original research.

Six current ASPB members were elected to this year's class:

Xinnian Dong

Professor of Biology, Duke University; and Howard Hughes Medical Institute-Gordon and Betty Moore Foundation Investigator

Harry Klee

Professor of Horticultural Sciences; University of Florida, Gainesville

Sabeeha Merchant

Professor of Biochemistry; University of California, Los Angeles

Natasha Raikhel

Distinguished Professor of Plant Biology; University of California, Riverside

Foreign Associates:

George Coupland

Director, Max Planck Institute for Plant Breeding Research

Ottoline Leyser

Associate Director, The Sainsbury Laboratory University of Cambridge

One additional plant biologist, unaffiliated with the Society, was also selected as a new member:

Pedro Sanchez

Director, Tropical Agriculture and Rural Environment; The Earth Institute, Columbia University

These plant biologists are among the 84 new members and 21 foreign associates just elected. There are now 2,152 active NAS members and 430 foreign associates. ■

This article originally appeared on April 12, 2012, as an announcement on the Miami University website. It is reprinted here with permission.

John Kiss Receives Benjamin Harrison Medallion

John Kiss, distinguished professor and chair of botany [Miami University, Ohio], received Miami University's prestigious Benjamin Harrison Medallion during the May 5 commencement ceremony. The announcement was made during faculty assembly April 11.

Kiss is internationally known for his research in botany and space biology, in particular his research on gravity perception mechanisms in plants. He is "a faculty member who has achieved impressive global stature," commented one nominator, "and yet continues to contribute locally in significant and personal ways."

His prolific research activity has been funded by \$5 million from more than a dozen major funding agencies in the sciences, including NASA, the National Science Foundation, and the National Institutes of Health. His research has resulted in 89 peer-reviewed



John Kiss

scientific articles—many of which have high impact in the fields of gravitropism and phototropism research—122 book reviews, and close to 200 invited talks.

He has held leadership positions in national professional associations including serving as president of the American Society for Gravitational and Space Biology (ASGSB). He was honored by the ASGSB in

2010 with the Orr E. Reynolds Distinguished Service Award for service "above and beyond" the call of duty, especially for his efforts in education, outreach, and support of undergraduate and graduate students in independent research.

In 2010 Kiss led a team of botanists—including Richard Edelmann, director of Miami's Center for Advanced Microscopy and Imaging, and Katherine Millar, current postdoctoral fellow. They received the 2010 NASA Ames Honor Award for their research on Tropi-2. Kiss and his team were also honored by NASA in 2007 for their work on Tropi-1.

Kiss, who joined Miami in 1993, has also been recognized for excellence in teaching and research with many awards at Miami: He was named a University Distinguished Professor in 2011; a University Distinguished Scholar in 2006; a Distinguished Scholar of the Graduate Faculty in 2005; and

in 1997 he received the Alumni Enrichment Award from the Miami University Alumni Association.

His professional reviewers concur that Kiss has established himself as the current international authority on plant biology research in space.

At Miami, his nominators state that Kiss's mentoring and advising of undergraduates reflects his "engagement, skill, and dedication to students and science" and that his "charismatic personality contributes to his lasting impact on students' and colleagues' lives across campus."

The Harrison Medallion is presented to members of Miami's faculty or staff who have made outstanding contributions to education. It is named for the 1852 Miami graduate who was president of the United States from 1889 to 1893. ■

Welcome to the *ASPB News* “Luminaries” column. Student and postdoc members are welcome to submit their ideas for a 500- to 750-word interview they might like to conduct with a prominent scientist. Just contact Membership Committee Chair David Horvath at david.horvath@ars.usda.gov, who will help you develop some questions to frame your story. If we publish your interview, you will receive a \$50 Amazon gift card.

For our inaugural column, we are delighted to publish Christos Noutsos’s interview with Professor Rob Martienssen. Rob is a professor at Cold Spring Harbor Laboratory, and Christos is a postdoc at Cold Spring Harbor Laboratory.

Rob Martienssen

BY CHRISTOS NOUTSOS

CN: Thanks for sitting for this interview. Let’s start at the beginning. How did you become interested in biology? Which scientific fields attracted you the most?

RM: Like many molecular biologists, I was more interested in physics and chemistry as an undergraduate. However, I quickly realized that mathematics was a major component, and my mathematics wasn’t that hot. As a result, I pursued genetics, which still has an abstract, mathematical side to it that I fell in love with.

CN: Was there a specific adviser or scientist who inspired you to pursue a career in science?

RM: That’s a very difficult question. Obviously, my PhD adviser, David Baulcombe, is a very important person for me. But as an undergraduate, I read genetics at Cambridge, and Mike Ashburner was a really important inspiration for me at the time and very much since then. His appreciation for the subject is really unique, and he’s quite a character as well! He probably led me on this path more than anyone else.

Later on, obviously, Barbara McClintock’s work was a huge inspiration to all of us. I learned about transposons first in genetics undergraduate classes and was really inspired by the whole area. It was a privilege to meet her when I first came to Cold Spring Harbor 10 years later. It was remarkable to be able to spend about three years with her before she died, and I got to know her pretty well. She taught me a lot, not just about science but also about scientists. She was a tremendous inspiration.

CN: If you had a chance to redo your graduate student or early postgraduate years, would you do anything differently?

RM: This is so interesting. I did my PhD with David Baulcombe, who at the time was just starting his position at the Plant Breeding Institute at Cambridge. I was his first graduate student. He was working on a number of things, and I ended up working for my PhD on a transposable element we discovered in wheat. Transposons has been a theme of my research ever since.

At the same time, he was just beginning to work on viruses.



Rob Martienssen

At the time, I didn’t see viruses as particularly interesting. However, he and I have both speculated about what might have happened if I actually had chosen viruses instead of transposons. The very first experiment he did of significance on viral silencing was done when I was there, but by someone else in the lab. It was a really important experiment on virus satellites having a significant effect on silencing that implicated RNA. Of course, it took almost 15 years for small RNAs to be discovered, but we’ve both ended up working on small RNAs. In his case, mostly in

viruses; in my case, mostly in transposons. But it all turns out to be the same thing. It’s an interesting thought as to what would have happened. But I’m still very happy that I ended up working on transposons, and I wouldn’t change that.

CN: When you graduated, research on characterizing a single gene was being reported in prestigious journals. Now you need a way to generate more data. What do you think of the amount and quality of work PhD students produce now?

RM: Technology has really moved on, obviously. It’s been an incredible ride the past 20 years, just thinking about sequencing, for example. I sequenced one gene, maybe two, for my PhD; now it’s about how many genomes you sequenced. I think it’s important to not get too wedded to the technology. What really matters is understanding, and sometimes you can understand a huge amount of biology through just a handful of genes or a single pathway. These days, it tends to be put in a much broader context,

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ROB MARTIENSSEN*continued from page 19*

so understanding everything around that pathway or that phenomenon is now much more important. That's really the big change, I think.

But getting insight into mechanisms still requires the same sort of deductive reasoning and logic that it always has, McClintock being a great example. Just look at what she was able to do with such limited tools (though don't forget she was a fantastic experimentalist—her microscopy, for example). But the genetic logic she used is still absolutely viable today, and that sort of logic can still provide extraordinary insights into biology.

So it's not just the huge amount of data that's important. You can't ignore it, and it's no secret that informatics and the ability to handle and summarize large datasets in meaningful ways has become a key skill that I think all biologists entering the field now have to learn some aspects of. I think it's impossible to do biology without understanding at least the principles of informatics.

CN: How do you compare research in genetics during the time when you were a PhD student to now, taking into consideration all the sequencing technologies?

RM: Well, certainly technology has changed dramatically in epigenetics. We can now routinely look genome-wide at all sorts of epigenetic marks, not only DNA methylation. When I was a graduate student, DNA methylation was pretty much the only widely accepted epigenetic mark. Now, of course, we have hundreds of histone modifications, not to mention all the noncoding RNAs and small RNAs. I think what's interesting is that the principles behind epigenetics haven't changed that much. We still know the importance of heritable changes that are not caused by DNA mutation. They're reversible, environmentally induced, and can be inherited through generations. All of that is still true. Some of the observations made by McClintock, Ed Coe, and R. A. Brink working in maize in the 1940s and 1950s are still principles we live by now. We just understand a lot more about the mechanism, and the technology has helped a lot with that.

CN: What advice would you give to educators to encourage young people to explore science and plant biology?

RM: That's an excellent question, and a very important one. I think the appeal of science as a career is changing. We see this in applications to graduate schools in the United States. There are fewer American students who are interested in going on to a postgraduate degree.

I would say that in the early years, encouragement, confidence, excitement, and conveying the importance of science all matter. Young kids in school are very smart; they want to know what the most important things are. Emphasizing science and giving it the attention it deserves is half the battle.

Part of the problem that we've had in the past few years has been the emphasis on the economy. The disparity between scientists and other professions is something that should be addressed economically, and different countries have very different ways of addressing it.

Getting people excited about science from a sort of "inner sense" is the most important thing, I think. You're not going to appeal to their

pocketbooks; you're going to appeal to their imagination and to the future. And don't underestimate the importance of the arts and culture. The science fiction of today may be the science of tomorrow! It certainly plays a big role in promoting science.

There are lots of ways to get people excited aside from traditional lecturing. Involving kids in experiments *early* is a good thing. I remember being fascinated by chemistry sets when I was a child, and I think that's still true of most kids. Getting them involved in DNA experiments early—why not? I think the DNA Learning Center has done an outstanding job of that. It's really impressive. The kids love it!

I think plants are coming into their own. Plant biology is going to lead the way in the biology of this century. ■

Read Christos's full interview with Rob Martienssen online at <http://newsletter.aspb.org/luminaries/martienssen.pdf>

SS-ASPB Meeting Report 2012

The 2012 meeting of the ASPB Southern Section (SS-ASPB) was held March 3–5 in Myrtle Beach, South Carolina. Jay Shockey, SS-ASPB secretary/treasurer, in cooperation with local host Doug van Hoewyk, organized the meeting. Rebecca Dickstein presided as chair, and Paul Stephenson served as vice chair in putting together this year's thematic Kriton-Hatzios Symposium.

The symposium featured three invited speakers on the general theme of chloroplast biology. Plenary speakers were Klaus Apel (Boyce Thompson Institute, Cornell University), Elizabeth Haswell (Washington University), and Henry Daniell (University of Central Florida).

The meeting enjoyed support from 24 colleges, universities, and government laboratories from nine states in the Southern region. There were 34 oral presentations, including 22 graduate student oral presentations. Twenty-three participants presented posters, including nine from undergraduates.

In an exceptionally competitive field, Elspeth Murday (Clemson University) won the graduate student oral competition, while Kala Peek, Caleb Kirkpatrick, and Cody Mullins

(all from Charleston College) won the Aubrey Naylor undergraduate poster competition.

In all, there were 77 registrants for this year's annual meeting. Crispin Taylor, ASPB's executive director, attended the meeting and presented a short informational talk at the awards banquet about the activities of the parent society. The program pages are available at <http://SS-ASPB.org>.

Next year's meeting will be held in Little Rock, Arkansas, and will be organized by Ashlee McCaskill, incoming SS-ASPB secretary/treasurer for 2012–2013, with Mariya Khodakovskaya serving as local host. ■



Left to right: Caleb Kirkpatrick, Kala Peek, and Cody Mullins (all from Charleston College) won the Aubrey Naylor undergraduate poster competition. The award was presented by Jay Shockey (far right). Photo by Stephen Banks.



Myrtle Beach, South Carolina, was the site of the 2012 SS-ASPB meeting. Photo by Stephen Banks.

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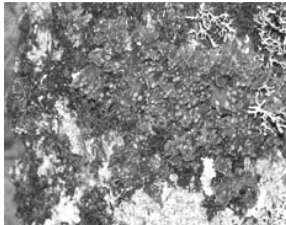
Prickly Pear Cactus



Turf Grass



Juniper



**Lichens
& Bryophytes**



The new **CCM-300**

Conifers



**Various
Aquatic Plants**



**Some types of
Algae on Rocks**



Fruit



Pineapple



Arabidopsis



Agave

Policy Update

BY KATHY R. MUNKVOLD, PhD

ASPB Associate Director of Public Affairs, kmunkvold@aspb.org

President Obama released his budget request for fiscal year 2013 on February 13, in the midst of major disagreement in Congress about federal spending and future tax policy. In this election year, the request reflects a political and campaign strategy for the president that communicates to the public that his administration is “all in” on the president’s top-line objectives of job creation, clean energy, education, manufacturing, and infrastructure renewal. The White House is hoping to draw sharp contrasts with the Republican presidential candidate’s ideas.

The president’s FY2013 budget request maintains federal funding for scientific research agencies and federal postsecondary education programs. Agencies include NSF, the Department of Energy’s Office of Science, and the USDA’s Agriculture and Food Research Initiative (AFRI). As for science and technology supporting job creation, the Obama budget embraces advanced manufacturing research; renewable energy technologies; science, technology, engineering, and math (STEM) programs; and research commercialization.

On March 22, House Budget Committee Chairman Paul Ryan (R-WI) unveiled the Republican budget resolution for FY2013. This resolution would peg federal spending available to the House of Representa-

tives on discretionary programs by \$19 billion below the level set last August in the Budget Control Act of 2011 (debt limit agreement). If the House passes this legislation, it will further complicate efforts to conclude the annual congressional appropriations process before the elections—or even before the end of the calendar year. The legislation also would inhibit the House’s ability to fully support proposed funding for research agencies.

The budget resolution proposed by House Republicans lays out a vision for this election year and is similar to legislation outlined by Chairman Ryan in 2011. It provides a framework that would require reductions in federal spending, but it also leaves many of the details to individual committees of jurisdiction.

Although many of the proposals are unlikely to become law at any point, Congress remains focused on avoiding the across-the-board spending reductions that are to be triggered by a sequester of all spending in January 2013. With the “supercommittee’s” failure to come up with a deficit reduction package last fall, a budget sequester is designed to implement annual savings if Congress cannot act. The House Republicans are primarily focused on the \$55 billion in defense cuts set to take effect in January 2013 and are looking to shift more

of the cost-cutting burden to nondefense spending, including funding for scientific research and entitlement programs.

Sonny Ramaswamy Tapped as Director of USDA’s National Institute of Food and Agriculture

On Friday, March 9, President Obama announced his intent to appoint Sonny Ramaswamy as the next director of the USDA’s National Institute of Food and Agriculture (NIFA). Ramaswamy will be replacing Acting Director Chavonda Jacobs-Young, who filled the vacancy left by the departure of former director and ASPB member Roger Beachy last spring. Ramaswamy is currently the dean of the College of Agricultural Sciences at Oregon State University, where he has served since 2009, and director of the Oregon Agricultural Experiment Station. Previously he held the positions of associate dean of Purdue University’s College of Agriculture and head of the Department of Entomology at Kansas State University.

Ramaswamy’s research has focused on the reproductive biology of insects and the interaction between insects and crop plants, including pests of wheat, cotton, beans, and trees. He has been honored for his scientific contributions as a fellow of the American Associa-

tion for the Advancement of Science, fellow of the Entomological Society of America, and distinguished graduate alumnus of Cook College, Rutgers University. Congratulations to Dr. Ramaswamy as he begins his new position at NIFA.

ASPB Signs on to Group Letter in Support of USDA Research, Education, and Economics

In March, ASPB joined more than 900 signatories on a letter to the leadership of the U.S. House of Representatives and Senate Committees on Appropriations; Subcommittees on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies in support of funding for the USDA Research, Education, and Economics (REE) mission.

The list of signatories included 30 private-sector enterprises, 90 societies and organizations, and 110 universities and research institutions. The letter called for a strong federal investment in USDA’s extramural programs within NIFA, such as AFRI and formula funds, as well as the department’s intramural programs, including the Agricultural Research Service, the Economic Research Service, and the National Agricultural Statistics Service.

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POLICY UPDATE*continued from page 23*

The letter highlighted agriculture as one of the “bright spots” in the economy during these difficult fiscal times and stressed that “For every \$1 invested in publicly funded agricultural and food research, \$20 in economic activity is generated.” The letter and the complete list of signatories can be viewed on the Public Affairs Advocacy Page at http://my.aspb.org/members/group_content_view.asp?group=68890&id=99035.

ASPB Supports New Legislation to Establish a Foundation for Food and Agriculture Research

While the ASPB Committee on Public Affairs made its rounds on Capitol Hill on March 29 advocating for plant biology research (see related article on p. 25), new legislation to establish a Foundation for Food and Agriculture Research was introduced by Senators Debbie Stabenow (D-MI) and Pat Roberts (R-KS), chairwoman and ranking member of the Committee on Agriculture, Nutrition, and Forestry, respectively. The foundation that would be created by the legislation aims to facilitate public-private partnerships and leverage private investments in food and agriculture research. The full text of the bill can be found at http://roberts.senate.gov/public/_pdf/WEI12224.pdf.

ASPB has been working closely with an ad hoc group in support of food and agriculture research, spearheaded by ASPB member and former NIFA

Director Roger Beachy, to elevate the perception of and need for food and agriculture research in general and specifically to establish a foundation similar to that proposed in the legislation, but with the ultimate goal of a federal match on private investments. The ad hoc coalition garnered support for the legislation through a letter with nearly 100 scientific societies (including ASPB), growers’ and producers’ associations, universities, and private companies signing on. The letter and list of signatories can be found at <http://1.usa.gov/H40Wa2>.

One extremely successful precedent for such a foundation is the Foundation for the National Institutes of Health (<http://www.fnih.org>), which during its 15-year existence has raised more than \$500 million in private donations to supplement NIH research funding.

It is expected that this legislation will be included in Farm Bill discussions. Accordingly, Chairwoman Stabenow stated in a press release (<http://tinyurl.com/cmkkjwuf>), “The potential to create this foundation as part of the new Farm Bill is yet one more reason to get the Farm Bill completed as soon as possible.”

ASPB Offers Public Comment in Support of Plant Biology Research at Federal Agency Meetings

On February 22, ASPB offered public comment at NIFA’s listening session on its competitive grants program, AFRI. The goal of the session was to obtain stakeholder comments to consider in developing the FY2013 AFRI solicitations. ASPB’s comments included the following recommendations for the program:

1. A top priority for ASPB is to sustain and grow AFRI because competitive research drives innovation, promotes the formation of effective research teams, and delivers tangible advances in food and agriculture.
2. ASPB asked for support of a robust competitive research program with broad priorities where proposals that address critical issues in the USDA mission statement are funded solely on intellectual merit and not on tightly constrained parameters.
3. ASPB asked that 30% of AFRI’s budget be dedicated to foundational research for individual investigator or

small team research projects addressing specific research problems.

4. ASPB called for funding of specific programs, such as training grants, that are targeted to provide the needed agricultural research workforce over the next 10 years and to adequately prepare these individuals for careers in the agricultural research of the future.
5. ASPB called for additional funding targeted toward efforts to increase the utility and agronomic performance of bioenergy crops.

ASPB also submitted written comments, which can be read in full on the Public Affairs Advocacy Page (<http://tinyurl.com/cjj4knl>).

On March 9, the President’s Council of Advisors on Science and Technology (PCAST) held a meeting that included a session with Secretary of Agriculture Tom Vilsack. Members of PCAST confirmed that they are taking up a study on our nation’s agricultural preparedness that many expect to focus on the role of research. Accordingly, Secretary Vilsack highlighted the challenges facing agriculture in terms of food security, sustainability, and regulation in a global market. He also stressed the role of agriculture in creating a bio-based economy.

The council heard from several scientific societies, including ASPB, about the importance of agriculture research. ASPB highlighted its efforts in convening the Plant Science Research Summit and

This column provides just a small sample of the content from ASPB public affairs, including material provided by ASPB’s government relations consultants, Lewis-Burke Associates, LLC. Also be sure to check out our blogs: *Plant Biology Policy, Funding Opportunities, and Plants in the News*. Please visit <http://www.aspb.org/publicaffairs> for the most up-to-date news.

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Committee on Public Affairs Advocates for ASPB Priorities in Washington, D.C.

BY KATHY R. MUNKVOLD, PhD

ASPB Associate Director of Public Affairs, kmunkvold@aspb.org



ASPB Committee on Public Affairs members in front of the White House. Pictured from left to right: Nick Carpita, Sally Mackenzie, Julian Schroeder, Dick Sayre, Beth Hood, Pat Schnable, and David Stern. Not pictured but also attending the meeting were Steve Huber (ASPB president), Norman Lewis, Maureen McCann, and Colleen Doherty (early career representative).

Amidst the iconic cherry blossoms early this spring, the ASPB Committee on Public Affairs (http://my.aspb.org/?G_Leadership#public) was hard at work advocating for federal support for plant biology research during its annual meeting in Washington, D.C. Held over two full days, the meeting consisted of discussions with federal agency representatives and policy makers on Capitol Hill that focused on the importance of plant biology research.

March 28 began with a detailed update on the status of overall scientific funding

from ASPB's government relations consultants and meeting hosts, Lewis-Burke Associates. Considering the current fiscal environment, the outlook for scientific funding in general seems promising. However, Lewis-Burke expects that the government will not pass a budget until after the election, obliging funding agencies to prepare for potential cuts. Likewise, Lewis-Burke anticipates that the pending Farm Bill reauthorization will be delayed until 2013.

Following the update, the committee met with representatives of five federal agencies:

1. U.S. Department of Energy (DOE)
 - Gail McLean, program manager, Basic Energy Sciences
 - Catherine Ronning, program manager, Biological and Environmental Research
 2. National Science Foundation (NSF)
 - John Wingfield, assistant director, Directorate for Biological Sciences
 - Jane Silverthorne, acting division director, Division of Integrative and Organismal Systems
 3. Department of the Navy (DON)
 - Chris Tindal, PE, CEM, director for Operational Energy, Office of the Deputy Assistant Secretary of the Navy for Energy
 4. U.S. Department of Agriculture (USDA)
 - Edward Kaleikau, national program leader, Institute of Food Production and Sustainability
 - Liang-Shiou Lin, national program leader, Institute of Food Production and Sustainability
 - Mary Peet, division director, Institute of Food Production and Sustainability
 5. Office of Science and Technology Policy (OSTP)
 - Mary Maxon, assistant director, Biological Research, Science Division
- Each agency highlighted relevant programs currently supporting plant biology research and the future of such research within the agency. A common theme among the speakers was the challenging fiscal climate and leveraging the funding available to make the largest impact. It was clear that translational research—moving scientific findings from bench to marketplace or field, in the case of plant biology—is important to this administration as well as to each of the agencies. But ultimately, the greatest influence on support for plant biology research comes from Congress during the appropriations process.
- On March 29, the committee dispersed on Capitol Hill for a full day of visits with their respective delegations and a number of relevant congressional committees to communicate the importance of plant

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COMMITTEE ON PUBLIC AFFAIRS*continued from page 25*

biology research. In each of their 38 meetings on the Hill (see box below), Committee on Public

Affairs members carried a message of increased support for scientific funding agencies and emphasized priorities for the forthcoming Farm Bill, along with other ASPB priorities. ■

Congressional Office Meetings

Senator Jeff Bingaman (D-NM)
 Senator Maria Cantwell (D-WA)
 Senator Dan Coats (R-IN)
 Senator Dianne Feinstein (D-CA)
 Senator Kirsten Gillibrand (D-NY)
 Senator Charles Grassley (R-IA)
 Senator Tom Harkin (D-IA)
 Senator Mike Johanns (R-NE)
 Senator Richard Lugar (R-IN)
 Senator Patty Murray (D-WA)
 Senator Ben Nelson (D-NE)
 Senator Charles Schumer (D-NY)
 Senator Tom Udall (D-NM)

Representative Joe Baca (D-CA)
 Representative Brian Bilbray (R-CA)
 Representative Larry Bucshon (R-IN)
 Representative Dennis Cardoza (D-CA)
 Representative Jim Costa (D-CA)
 Representative Susan Davis (D-CA)
 Representative Norm Dicks (D-WA)
 Representative Bob Filner (D-CA)
 Representative Jeff Fortenberry (R-NE)
 Representative Chris Gibson (R-NY)
 Representative Martin Heinrich (D-NM)
 Representative Duncan Hunter (R-CA)
 Representative Darrell Issa (R-CA)
 Representative Tom Latham (R-IA)
 Representative Bill Owens (D-NY)
 Representative Steve Pearce (R-NM)
 Representative Cathy McMorris Rodgers (R-WA)
 Representative Todd Rokita (R-IN)
 Representative Adrian Smith (R-NE)

Senate Committee on Agriculture, Nutrition, and Forestry
 Senate Committee on Armed Services
 Senate Committee on Commerce, Science, and Transportation; Subcommittee on Science and Space
 Senate Committee on Foreign Relations
 House Committee on Agriculture
 House Committee on Appropriations; Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies

POLICY UPDATE*continued from page 24*

asked that PCAST continue to focus on the critical role of research—especially plant biology research—in addressing urgent societal challenges. ASPB's comments also can be read in full on the Public Affairs Advocacy Page (<http://tinyurl.com/cjj4knl>).

ASPB Tops 1,000 Twitter Followers

By March 2012, ASPB had amassed more than 1,000 followers on its Twitter feed and more than 600 "likes" on its Facebook page. ASPB's pres-

ence on social media outlets such as Twitter and Facebook allows the Society to provide timely updates on plant biology in the news, policy changes affecting plant biology research, and funding opportunities to anyone who is interested in these topics. As our online community grows, so will our ability to communicate with others about the fascinating world of plant science. If you haven't already done so, please join us online: "like" us on Facebook (<http://www.facebook.com/myASPB>) and "follow" us on Twitter (<http://www.twitter.com/ASPB>). ■

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ASPB Member Gary Coleman Testifies in Support of NSF

BY KATHY R. MUNKVOLD, PhD
ASPB Associate Director of Public Affairs, kmunkvold@aspb.org

On March 22, ASPB member Gary Coleman testified before the U.S. House of Representatives Committee on Appropriations; Subcommittee on Commerce, Justice, Science, and Related Agencies in support of the National Science Foundation (NSF).

In his testimony, Gary urged the members of the subcommittee to fully fund NSF at the president's requested level of \$7.373 billion for fiscal year 2013. He stressed that "without significant and increased support for Directorate for Biological Sciences and the NSF as a whole, promising fundamental research discoveries will be delayed and vital collaborations across scientific disciplines will be postponed, thus limiting the nation's ability to respond to the pressing scientific problems that exist today and the new challenges we can see on the horizon."

Gary also highlighted the benefits of an NSF-funded summer training program for underrepresented high school and undergraduate students in plant biology that he and his colleagues developed. In addition to support for education and training programs at NSF, Gary stressed the importance of the Plant Genome Research Program, which has provided a significant portion of the



NSF's support for plant biology research since its inception in 1998.

Subcommittee members in attendance during the session included Chairman Frank Wolf (R-VA), Ranking Member Chaka Fattah (D-PA), John Culberson (R-TX), Tom Graves (R-GA), and Adam Schiff (D-CA). The majority of testimony focused on support for NSF and NASA. The members present were all engaged and repeatedly stated the committee's support for scientific research as a whole.

Each year, Congress accepts outside witness testimony—

either written or from public witnesses—as the appropriations process gets under way. In addition to Gary's public testimony supporting NSF, ASPB also has submitted written testimony to both the House and Senate in support of the president's budget requests for the U.S. Department of Agriculture, U.S. Department of Energy, National Institutes of Health, and NSF. To view the full statements, please visit the Public Affairs statements page (http://my.aspb.org/members/group_content_view.asp?group=68890&id=99039). ■

Gary Coleman is an associate professor in the Department of Plant Science and Landscape Architecture at the University of Maryland. Using poplar as a model system, his research interests include understanding the biology of tree growth and development, regulation of vegetative bud dormancy, and nitrogen storage and use efficiency. Gary also serves as the chair of the Mid-Atlantic Section of ASPB (<http://my.aspb.org/group/midatlantic>).

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Plant Physiology is pleased to announce a Focus Issue on the Plant Physiology of Global Change to be published in December 2012. Lisa Ainsworth and Don Ort will edit this Focus Issue. Research article submissions on all aspects of the impacts and interactions of global change on plants as well as the impacts of plants on global change are invited. The scope of this Focus Issue includes but is not limited to adaptation to single and interacting global change factors, perception of and signaling in response to global change factors, the biology of global change mitigation, agricultural impacts of global change, global change impacts on plant biotic interactions, and plant migration in response to global change.

Authors interested in contributing should indicate this in the cover letter when submitting papers online at <http://submit.plantphysiol.org>. Please select “The Plant Physiology of Global Change (December 2012)” from the Focus Issue list in the online submission system. Articles published in *Plant Physiology* on this topic within 2 years before and after the Focus Issue publication date will be collected in an online Focus Collection on the Plant Physiology of Global Change.

Please contact Lisa Ainsworth (ainswort@illinois.edu) or Don Ort (d-ort@illinois.edu) for additional information.



ASPB Outreach: Growing Awareness about the Importance of Plants in Daily Life and Education

BY SCOTT WOODY, University of Wisconsin
SUZANNE CUNNINGHAM and SHERRY FULK-BRINGMAN, Purdue University

Your ASPB has been busy during these early months of 2012. We have hosted outreach booths at both the AAAS convention in Vancouver, British Columbia, February 15–20, and at the National Science Teachers Association (NSTA) conference in Indianapolis, Indiana, March 29–April 1. Both occasions provided opportunities for our membership to communicate to the public the vital importance of plants in our daily lives and, especially, the utility of plants in the classroom to engage students and their teachers in biology education and the practice of science. Given the hearty appetite evident in the general public to learn more about the natural world that surrounds us and given teachers’ needs to adapt to a rapidly changing, standards-based educational landscape, our outreach efforts were very timely and warmly appreciated at both venues.

ASPB at AAAS Family Science Days Vancouver, BC

Our exhibitor’s booth during the AAAS convention was part of “Family Science Days,” a free

and open-to-the-public event that offered visitors the opportunity to interact with scientists, members of professional societies, commercial vendors of science-related products, and even astronauts from the Canadian Space Agency. Among the many lasting memories of the weekend event was the sight of long lines of parents and their children waiting to register and then explore the exhibit hall.

The ASPB booth at Family Science Days was managed by University of Wisconsin–Madison undergraduate Tom Bryan, with the assistance of ASPB Education Committee

member Scott Woody. The booth was staffed at various times by Tom; Scott; Barbara Alonso (University of California, Berkeley); Rob McClung and Mary Lou Guerinot (Dartmouth College); George Haughn, Carl Douglas, and Ljerka Kunst (University of British Columbia [UBC]); and other UBC volunteers, including Tess Grainger, Lacey Samuels, Robin Young, Heather Rowe, and Teagen Quilichini. Tom brought the Kalaenchloe (Mother of Thousands, or MoT) citizen-science project to the booth, offering visitors the opportunity to nurture MoT



Scene from an overlook at Family Science Days, held February 18–19 during the AAAS annual meeting at the Vancouver, BC, Convention Center. Total attendance was estimated to be approximately 6,000 visitors.

plantlets within a necklace they created using soil in a plastic container, a bit of water, and some ongoing TLC. This simple activity and the enthusiastic response, especially from the youngest of the budding scientists to visit the ASPB

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ASPB booth at Family Science Days, in Vancouver, British Columbia. Rob McClung and Tom Bryan (above, at right), using *Mother of Thousands* (the remnant plant, center) to help visitors appreciate the pleasures to be gained by growing plants.



Karl Douglas (foreground, at right) and Barb Alonso (background, at right) engage young visitors to the ASPB booth in using their senses to identify hidden gifts from plants within paper bags and to make evolutionary connections among citrus and vegetable plant products.

ASPB OUTREACH

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display, is an effective testament to the power of plants to engage people of all ages in the scientific enterprise. Rob, Mary Lou, Barbara, and George were especially dedicated to engaging visitors to our booth, and UBC student volunteers were likewise energized by the experience.



Promoting plants at AAAS. While volunteers like Rob, Mary Lou, Tom, and Scott are becoming veterans at such outreach events, another lasting memory of the Family Science Days experience at AAAS 2012 was to witness the rewards of public outreach obtained by UBC undergraduates who stepped up to help host the ASPB booth.



Future plant biologists put their visions of plant biology to paper using crayons at the ASPB booth.



Purdue undergraduate Kirsten Thomas guides a teacher through plant-based classroom activities.

ASPB at NSTA Indianapolis, Indiana

In stark contrast to the public outreach connection established by the ASPB booth at the 2012 AAAS Family Science Days, the annual conference of the NSTA at the cavernous Indiana Convention Center presented the opportunity for ASPB to inform educators on the front lines of U.S. science education of the many ways in which plants can be used in their classrooms to help students better appreciate plant biology and to leverage the presence of living organisms

to engage student wonder and excitement in the scientific enterprise. During three full days of outreach, ASPB members Suzanne Cunningham, Sherry Fulk-Bringman, and Nick Carpita (all of Purdue University), Purdue undergraduate volunteers Melanie Jones and Kirsten Thomas, and Indiana University



Scott Woody describes how the Fast Plants^{sc} suite of genetic and molecular resources can help students and teachers alike to better understand genetics, evolution, and modern genomic sciences.



ASPB Immediate Past President Nick Carpita (right) discusses the usefulness of plants for reaching students in biology education.

graduate student Jessica Lucas, along with Scott Woody and Tom Bryan (UW-Madison), hosted the ASPB education and outreach booth.

Having NSTA in Indianapolis enabled Suzanne and Sherry to present to visitors starch-agar gels, varieties of corn and developing corn seedlings, soil monoliths, and a multitude of

hands-on soil experiments for eager teachers seeking ways to incorporate plant science and soil properties into their biology, chemistry, and earth science classrooms. Kirsten and Melanie, Purdue agronomy undergraduates, assisted at the ASPB booth. Suzanne and Kirsten answered lots of questions about our orange (high β -carotene) corn, how we got our seedlings to grow so well (“There’s no mold! How did you do that?”), and the multitude of ways to use starch-agar gels in demonstrations and labs. Sherry and Melanie discussed many properties of soils. Erosion and its prevention, “soil has a charge,” nutrient movement, the nitrogen cycle, and soil pH were among the many highlighted experiments and demonstrations showcased.

The ASPB booth offered an oasis of sorts to teachers roaming through the vast sea of vendors stationed in the exhibit hall. That is, unlike most

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Focus on Education at Plant Biology 2012

Enhance your conference experience by including some of these events designed to pique the interests and meet the needs of science educators.

Please verify all logistics online at <http://austin2012.aspb.org> or on-site in Austin.

EVENT	DESCRIPTION	ACCESS NOTES
Poster Session for Undergraduate Networking Friday, July 20, 9:30–10:30 a.m.	Welcome the next generation of plant biologists! Undergraduates display their posters during this special session.	Open to all <i>Light refreshments</i>
Small Colleges/PUI Research Networking Event Friday, July 20, 11 a.m.–12:30 p.m.	Join with scientists working at or interested in primarily undergraduate institutions (PUIs). Network, discuss common interests, find out about PUI-related opportunities, and provide feedback on ASPB programs for PUIs.	Online preregistration required. Free.
How to Be a Great Teacher: A Hands-on Workshop for Postdocs and Students Saturday, July 21, 7:30–10 p.m.	Consider goals for teaching diverse groups of students, discuss and practice methods for engaging students, and explore ways to assess student learning. We also will share ideas about how graduate students and postdocs can find opportunities to teach.	Online preregistration and ticket purchase required. \$30 faculty/\$25 post-docs/\$20 students. <i>Buffet dinner</i>
Education Workshop: Case Study Teaching—Engaging Students in Plant Biology Problem Solving Sunday, July 22, 7:30–10 p.m. <i>Speaker:</i> Paula Lemons, University of Georgia and NCCSTS	Explore case study teaching and related teaching materials available through the National Center for Case Study Teaching in Science (NCCSTS; http://sciencecases.lib.buffalo.edu/cs). Attendees will tackle a plant biology case, experiencing case study teaching from the student perspective and seeing how cases can be used to foster learning of science concepts and skills. The workshop will end with an invitation for participants to apply for sponsorship from ASPB to join a weeklong professional development workshop at the NCCSTS in New York in May 2013. Sponsored by the ASPB Education Committee.	Online preregistration required. Free. <i>Light refreshments</i>
Education Minisymposium (#26) Monday, July 23, 3:45–5:30 p.m.	Learn from plant scientists sharing their education and outreach innovations, including ways to study the efficacy of instructional materials and teaching approaches. <i>Presenters:</i> Eric Brenner, New York University; Jelena Brkljacic, Ohio State University; Robert Donaldson, George Washington University; Stacey Lundy, Wake Forest University; David Micklos, Cold Spring Harbor Laboratory	Open to all
Competition for Innovative Instruction—Winning Projects Daily in the Education Booth	See how colleagues are teaching plant science in the laboratory, classroom, and other venues. Speak with the Education Booth competition winners about their innovative techniques, technologies, and strategies for teaching plant science.	During exhibit hall hours
Hot Topics in Science Education Daily in the Education Booth	Meet experts for interactive 30- to 60-minute sessions to discuss the hottest science, outreach, and education topics (PB2012 session topics TBA). To suggest a topic or facilitate a discussion, please e-mail Erin Dolan, Education Committee chair, at eldolan@uga.edu. Sponsored by the ASPB Education Committee.	During exhibit hall hours
Resource Library Daily in the Education Booth	Peruse selected resources on how people learn and help yourself to education and outreach materials—all free for the taking.	During exhibit hall hours

ASPB Invited Back to Host Science Outreach at the White House

BY KATIE ENGEN and KATHY MUNKVOLD

On Monday, April 9, ASPB returned to the White House to host a plant science outreach booth as part of the 134th Easter Egg Roll. A tradition started in 1878 by President Rutherford B. Hayes and his wife, Lucy, the Easter Egg Roll soon became known as an exhilarating day of play for everyone. This year's theme—"Let's go. Let's play. Let's move."—embodied that same high-energy spirit. From 7:30 a.m. to 6:45 p.m., some 30,000 visitors (in five waves of 6,000 people) from all 50 states and Washington, D.C., hopped, strolled, sprinted, and rolled across the South Lawn to all the activities, sports, and games.

The Obama Family and the Easter Bunny greeted the crowd at midday from the White House South Portico, then joined the fun

on the South Lawn. First Lady Michelle Obama spoke at the Kids' Kitchen with weather guru Al Roker, chef Marcus Samuelsson, and three children about gardening and how fresh, seasonal eating is a healthy goal everyone should aim to achieve. Mrs. Obama shared that she tells her daughters, Malia and Sasha, "Vegetables aren't really a choice. You've got to eat your vegetables every day." Leading by example, she then enjoyed the vegetable and shrimp tacos prepared by Chef Samuelsson.

After lunch, Mrs. Obama greeted members of the crowd, including ASPB President Steve Huber and several others who were volunteering at the ASPB booth. Steve shook the

First Lady's hand while wearing a lab apron bearing the ASPB name, and Mrs. Obama indicated she recognized the Society. Steve thanked her for all her effective efforts to promote health and nutrition, pleased that such a brief encounter sparked a positive comment for ASPB.

By design, the ASPB booth was planted adjacent to the First Lady's garden, and several

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PHOTOS COURTESY OF KATHY MUNKVOLD



Thank You, ASPB Volunteers!

We really had to “hop to it” to keep pace with the crowd of youngsters eager to make garden cups and talk about plants. Staff representatives Katie Engen, Shoshana Kronfeld, Diane McCauley, Kathy Munkvold, and Crispin Taylor are grateful for the expertise and energy volunteered by the Society members and associates who joined ASPB President Steve Huber for a fun and productive day. Thank you to Andrew Auffarth, Briana Bostic, Elena Del Campillo, Brennah Engen, Joan Huber, Melantha Jackson, Samuel Jones, Daniela Parker, James Parker, Janet Slovin, Clare Taylor, Cynthia Taylor, Dylan Taylor, Emma Taylor, George Ude, and MariaElena Zavala.

Well-deserved thanks also goes to the six volunteers from the general public assigned to our booth by the White House. The booth benefited from their energetic efforts, and each volunteer learned a bit about plant biology, too.

ASPB AT THE WHITE HOUSE

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ASPB volunteers enjoyed a “cook’s tour” of the garden with White House kitchen representative Chef Rachel, who pointed out peas, arugula, broccoli rabe, spinach, strawberries, herbs, the cluster of blueberry bushes, and even the new fig tree sapling. A lush array of cabbages and lettuces sporting a range of colors and leaf shapes were so beautiful that even our geneticists, who might normally prefer plants with more significant genetic variations, were enamored. In fact, most all the plants were particularly robust for early April. Chef Rachel explained that the mild winter

allowed gardeners to transfer plants from the greenhouse early and thus the kitchen staff already had prepared full salad courses for a variety of official White House events this spring. Chef Rachel and the garden staff were thrilled to take a donation of soil pellets as a thank you from ASPB. She called the pellets “black gold” and agreed that using them to enrich the soil ecosystem would improve the garden’s yield.

Inside the ASPB “Quick-Like-a-Bunny” booth, youngsters sowed lettuce, carrot, and radish seeds to start mini garden cups full of yummy bunny- and kid-friendly food. These quick-germinating vegetable seeds were selected because

they provide nutritious foods that help brains and bodies act “quick like a bunny,” too. Volunteers from the Society (see sidebar on page 33, *Thank You, ASPB Volunteers!*) guided the young visitors to assemble garden cups and chat about what seeds are, how plants develop, and the many ways plants are important in daily life. For example, many families were pleased to learn that the garden cups and lids were made not from regular plastic but with recyclable, corn-based material. Overall, booth visitors were very eager to dig in to all the biology concepts we offered, a response our volunteers especially appreciated because ASPB was the only scientific society

hosting an activity on the South Lawn this year.

To help everyone recognize the ubiquitous presence of plants in all our lives and to reinforce an interest in voting during this election year, ASPB also asked visitors to decide which “party” of plant-based products—food, fiber, or fuel—help them the most to think and act “quick like a bunny” each day. The ballot defined each category in very basic terms. And ballot boxes were decorated with colorful images of each “candidate,” so even the youngest voters could make a well-informed choice. Exit polls showed that food had an early lead over the other candidates. The final count was FOOD–440, FUEL–146, and FIBERS–157. Either way, the day proved that sowing the seeds of plant biology concepts in the fertile minds of gleeful and curious Easter Egg Roll participants is a winning combination. Here are some quips and quotes from our youngest plant fans:

- Twin 1: *Now I’ve got a carrot around my neck!*
- Twin 2: *Look, Mom, we’re going to have two carrots in our garden now!*
- Toddler in arms: *I yike [sic] this, Daddy.*
- *Mommy, I think it’s definitely fiber that should win.*
- *I have to care for this plant. It needs water and soil and caring.*
- *I have planted my whole garden now. Thank you.*
- *We did all the other activities, but we just wished we could come back and plant the other kinds of seeds, too. Can we? (Yes!) ■*



SURFing with ASPB

2012 Summer Undergraduate Research Fellowships

ASPB Summer Undergraduate Research Fellowships (SURF; http://my.aspb.org/?page=Education_SURF&CFID=542341&CFTOKEN=93217935) allow promising undergraduate students to conduct meaningful research in plant biology early in their college careers. SURF students must work for 10 consecutive weeks with a mentor who is an ASPB member. An important aspect of SURF is its recognition that institutions have varying resources for sustaining different types of research, and so applications received from larger (group A) and smaller, primarily undergraduate institutions (group B) are reviewed separately. This year's nine group A recipients and six group B recipients will present their SURF research at the undergraduate and general poster sessions during Plant Biology 2013, July 20–24, in Providence, Rhode Island.

The ASPB SURF Committee would like to thank all the students and mentors who applied to the 2012 SURF program. Once again, the applications for this increasingly competitive award were both plentiful and outstanding. In fact, the reviewers needed extra time to choose the 15 SURF recipients and 11 honorable mentions this year.

Congratulations to all the students featured here!

Group A Research and Doctoral Universities



Tara Alpert, Washington University in St. Louis

Mentor: Joseph Jez, Washington University in St. Louis

Project: *Uncovering missing steps in the phosphobase methylation pathway of Arabidopsis thaliana*

I am so excited to be able to do research this summer with the Jez Lab at Washington University to continue my work from

the academic year with the phosphobase methylation pathway. My goal is to attend a top graduate school to continue contributing to the scientific plant community, and the invaluable experience I will gain this summer thanks to ASPB will surely get me there.



Robert Bayne, University of North Carolina, Chapel Hill

Mentor: Michael Blatt, University of Glasgow

Project: *Evaluating the interaction between the KCl K⁺ channel and the SNARE SYP121*

Thanks to the SURF grant, I will be able to conduct research full-time throughout the summer and then present my findings at an international conference. Such an opportunity simply cannot be replaced, and I believe it will be instrumental in preparing me for a career as a scientist.



Hannah De Jong, Cornell University

Mentor: Georg Jander, Boyce Thompson Institute for Plant Research/Cornell University

Project: *Does turnip mosaic virus induce volatile production in Nicotiana benthamiana to attract aphid vectors?*

Research in Georg Jander's lab has shown that aphids are more attracted to TuMV-infected *Nicotiana benthamiana* plants than to uninfected plants. For my project, I will be performing bioassays to determine whether TuMV infection elevates plant volatile production, thereby increasing aphid preference for the infected plants.



Xinxin Ding, Worcester Polytechnic Institute

Mentor: Luis Vidali, Worcester Polytechnic Institute

Project: *Isolation of conditional loss-of-growth mutants in the moss Physcomitrella patens and morphological characterization of their growth*

I am really honored and grateful to be chosen to receive the 2012 SURF grant.

With this fellowship, I will be able to start my research on the conditional mutants of the moss *Physcomitrella patens* and gain valuable experience to promote my future education and career in the field of plant biology. I would like to thank ASPB for providing this great opportunity to international students. Thanks also to Dr. Luis Vidali and Dr. Elizabeth Ryder for their continual encouragement and guidance.

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SURF WINNERS

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Colleen Hartel, Purdue University
Mentor: Keith Woeste, Purdue University
Project: *A comparison of the genetic diversity of yellowwood (Cladrastis kentukea) trees sampled from captive and wild populations*

I am so grateful to ASPB and my mentor, Dr. Keith Woeste, for giving me the opportunity to participate in undergraduate research this summer. I know this provides

me with invaluable experience that will surely aid me in all my future academic experiences.



Stephanie Klein, University of Illinois at Urbana–Champaign
Mentor: Andrew Leakey, University of Illinois at Urbana–Champaign
Project: *Auxin control of Medicago truncatula root development under elevated CO₂*

Receiving the ASPB Summer Undergraduate Research Fellowship will allow me to grow as a scientist and as a leader and

prepare me for a career in academic research and education, which will allow me to encourage the next generation of scientists in much the same way that my past instructors and lecturers encouraged me. It will allow me to pursue a senior thesis project exploring root development in a lab setting that was previously observed in the field.



Christina Lee, University of Michigan
Mentor: Erik Nielsen, University of Michigan
Project: *KOR2, a membrane-localized beta-(1-4)-endoglucanase, and its role in cell wall synthesis in root hair cells*

With the support of this fellowship, I will have the opportunity to continue with my project this summer, which will help develop my skills as a better researcher and

analytical thinker, as well as allow me to broaden my knowledge in the field of plant biology.



Alexander Reynolds, Louisiana State University
Mentor: Aaron Smith, Louisiana State University
Project: *Excluding arsenic uptake by modifying phosphate transporter expression*

Receiving the ASPB award for summer research is definitely an accomplishment to be excited about. I am very honored to have the opportunity to continue my

research through the summer and further my career in science with the help of this award.



Alex Shaw, University of Illinois at Urbana–Champaign
Mentor: Thomas Jacobs, University of Illinois at Urbana–Champaign
Project: *Directionality of carbon dioxide sensing molecule in Pisum sativum*

Winning the SURF this summer will greatly improve my scientific inquiry. My work also will be essential for my senior thesis project for my university.

Group A Honorable Mention



Hillary Cirka, Worcester Polytechnic Institute
Mentor: Pamela Weathers, Worcester Polytechnic Institute
Project: *Artemisinin and flavonoid production in shoots via root elicitation for hydroponic use*

Applying for ASPB SURF has encouraged me to pursue my interest in plant biology.



Lily Gage, Carleton College
Mentor: Kenneth Olsen, Washington University in St. Louis
Project: *Investigating the role of water and nitrogen stress in white clover cyanogenesis clines*

Applying for the ASPB SURF grant gave me great insight into the scientific process. I grew as both a student and a scientist, and I am honored to have received recognition for my proposal.



Leslie Holland, New Mexico State University
Mentor: Aymeric Goyer, Oregon State University
Project: *Functional genomics of potato nutritional value: Identification of regulatory genes of folate biosynthesis*

I feel very fortunate to receive an honorable mention in my category for the SURF program. I believe this achievement will

make me a competitive candidate for future opportunities and strengthen my background as I continue my studies in plant biology.



Praphapan Lasin, Worcester Polytechnic Institute
Mentor: Pamela Weathers, Worcester Polytechnic Institute
Project: *Comparison of root and shoot elicitation of flavonoids and artemisinin in Artemisia annua L.*

Applying for the SURF grant gives me a chance to reflect upon my research and my future career path. This encourages me

to pursue my goal of becoming a professor and a researcher with more certainty and confidence.



Rachel McCabe, University of Maryland
Mentor: Janet Slovin, USDA-ARS Beltsville
Project: *A novel chloroplast small heat shock protein in Fragaria vesca*

Applying for this scholarship has given me my first opportunity to design a project, and it will be the basis for my future career in the biological sciences. I look forward to continuing this line of research!



Crystal Owens, Duke University
Mentor: Meng Chen, Duke University
Project: *Phytochrome photobodies and protein degradation*

Applying for the 2012 SURF award led me to explore plant science as a potential career field and develop and articulate my future goals. The process has exposed me to a fascinating area of research that I had not previously considered. As I am still

exploring various topics of interest, receiving an honorable mention has boosted my confidence to continue following my research dreams.

Group B Primarily Undergraduate Institutions



Keri Caudle, Fort Hays State University
Mentor: Brian Maricle, Fort Hays State University
Project: *Genetic and environmental influence on physiological drought tolerance in big bluestem*

The ASPB's SURF award will provide me with a prime opportunity to strengthen my research skills so that I may excel in future thesis and dissertation projects.

Additionally, research experience gained through ASPB will help me advance in my desired field of research in plant physiology.



Jon Cody, Southern Illinois University Edwardsville
Mentor: Darron Luesse, Southern Illinois University Edwardsville
Project: *Over-expression of GGPS3 to rescue ggps1-1 mutant phenotype*

Receiving the ASPB Summer Undergraduate Research Fellowship is a great opportunity to expand my knowledge in the field of plant molecular biology and

gain experience working in a laboratory setting. This grant will enable me to further pursue my research and aid in my transition into graduate school.

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SURF WINNERS

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Colleen Friel, Allegheny College
Mentor: Catharina Coenen, Allegheny College

Project: *Auxin effects on root exudation and colonization by biocontrol bacteria*

The ASPB SURF grant will allow me to continue research at my undergraduate college over the summer, bridging the time between my independent research as a junior and my senior project. This

continuity will enable me to conduct a longer-term project prior to graduation, substantially enhancing the depth of my research experience and my chances to produce publication-quality data.



Seanna Hewitt, Pacific Lutheran University

Mentor: Rosemarie Haberle, Pacific Lutheran University

Project: *Phylogenetic systematics of the North American genus Triodanis (Campanulaceae) and comparative chloroplast genomics and phylogenetics of the Campanulaceae subfamily Campanuloideae*

I am honored and excited to have been chosen as a recipient of ASPB's 2012 SURF grant, and I look forward to the opportunity to investigate my botanical interests in greater detail. As I continue to study chloroplast genomics and phylogenetics this summer, I hope to solidify my career objectives while playing a part in the valuable research of a fascinating plant family.



Iftekhar Showpnil, Ohio Wesleyan University

Mentor: Chris Wolverton, Ohio Wesleyan University

Project: *Investigation of the rate of auxin transport in pin3, pin4, pin7 single mutants, and pin3pin7, pin4pin7 double mutants in roots of Arabidopsis thaliana*

The ASPB SURF award will allow me to spend the summer working on research that I have been involved with and am passionate about. It will help me finish the ongoing project and give me the opportunity to author a scientific paper, which would be a great experience for me to have as an undergraduate student. This experience will open new doors for me in the fields of plant research and biochemistry as I prepare for higher education after college.



Kristen Versluys, The King's University College

Mentor: Hank Bestman, The King's University College

Project: *Investigation of carbon allocation between biosynthetic pathways in Neochloris oleoabundans under nitrogen-limiting growing conditions using 13C-labeling techniques*

This award will provide me with the opportunity to connect my book-based knowledge of metabolic pathways to practical, hands-on research. It also will solidify my desire to pursue further studies in plant biology.

Group B Honorable Mention



Molly Gorder, University of Minnesota Duluth

Mentor: Clay Carter, University of Minnesota Duluth

Project: *Sucrose-phosphate synthase 2F: A gene involved in nectar production in Arabidopsis thaliana*

Applying for the ASPB SURF award gave me the opportunity to further consider a career in plant biology. I greatly appreciate the honorable mention I received. I look forward to applying the knowledge I have gained through this process as I continue my work in the Carter lab, where I examine the genes involved in nectar production in *Arabidopsis thaliana*.

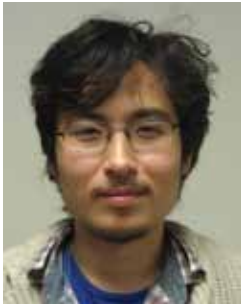


Spencer Gordon, University of Puget Sound

Mentor: Andreas Madlung, University of Puget Sound

Project: *Transcriptome analysis during flower reversion in Arabidopsis suecica*

Applying for the ASPB SURF award gave me a very good understanding of how to write and edit brief proposals. This opportunity also allowed me to learn how to write a personal statement.



Nurlybek Mursaliyev, James Madison University

Mentor: Jonathan Monroe, James Madison University

Project: *Characterization of a catalytically inactive β -amylase (BAM9) from Arabidopsis*

I am dedicated to becoming a researcher in plant biology. Applying for a SURF grant made me better prepared for ap-

plying to graduate school, and it encouraged me to achieve my career goals.



Kelsie Musil, University of Nebraska at Kearney

Mentor: Paul Twigg, University of Nebraska at Kearney

Project: *Effects of zinc deprivation on lipid accumulation in Chlamydomonas reinhardtii*

I appreciate being given an honorable mention for my ASPB SURF application.

It's an honor to be considered, and the

process of designing the project and focusing my thinking will be worthwhile as I work toward my BS in biology.



Cameron Venable, Lebanon Valley College

Mentor: Robert Carey, Lebanon Valley College

Project: *Effects of amino acid capping agents on ZnS nanoparticle phytotoxicity*

Applying for the ASPB SURF grant allowed me to explore a field of research in which I am interested. This field of research is not only interesting, but it

also has the potential to benefit humankind. ■

ASPB OUTREACH

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other booths occupied by science education supply companies, the ASPB booth merely gave free advice on how to use plants in the classroom to enhance student learning in biology and science. Also remarkable was the cross-pollination between the ASPB booth and other education-oriented stations. Thus, throughout the three days of the exhibit, we sent our booth visitors to the Wisconsin Fast Plants® and Soils Science Society of America booths for more hands-on plant and soil demonstrations, respectively; and they, in turn, sent their booth visitors our way!

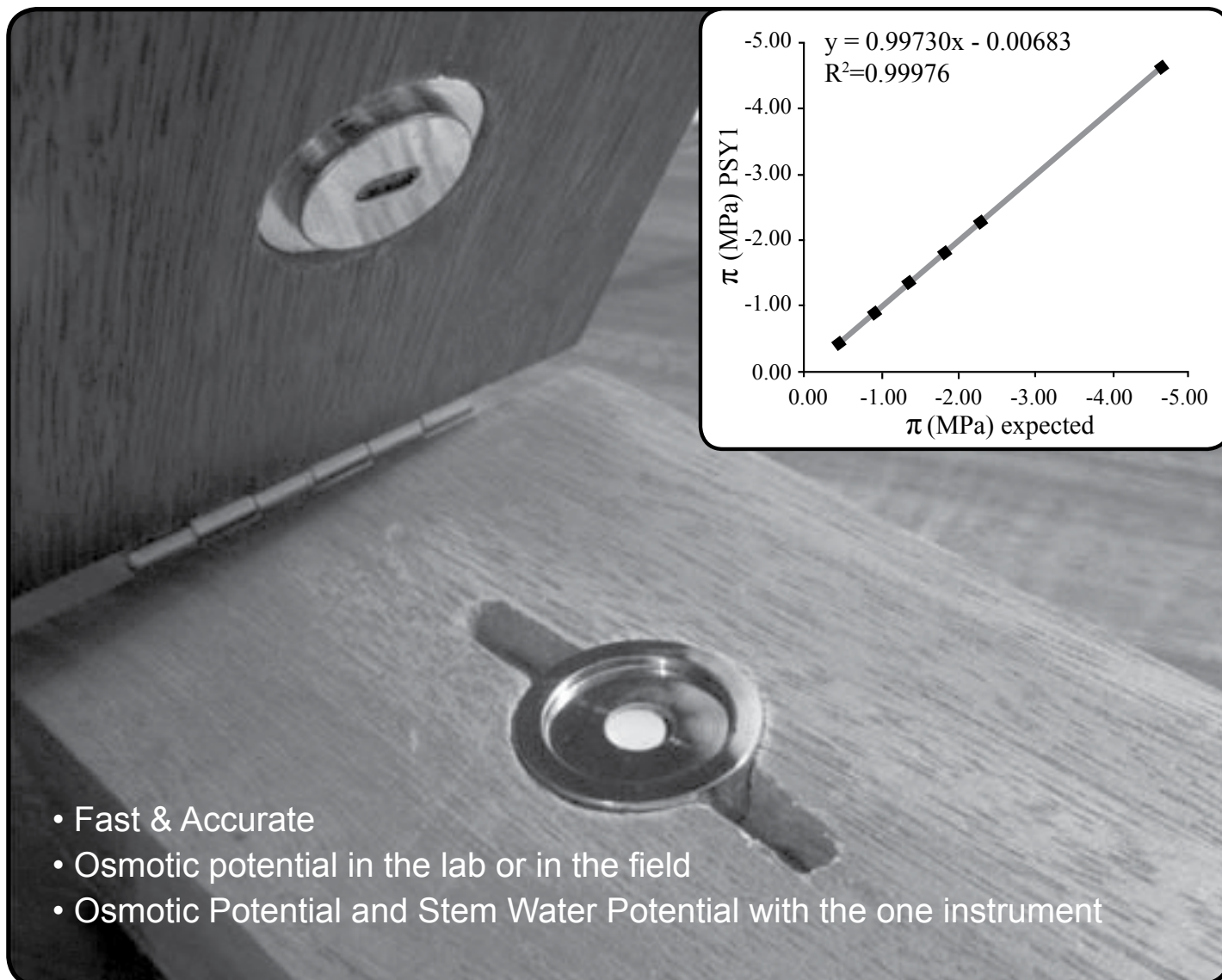
Clearly, ASPB has been very active in outreach and education in 2012—and it's only spring! We have been fortunate to have had the assistance of several ASPB past presidents (Nick Carpita, Rob McClung, and Mary Lou Guerinot), and their involvement is a testament to their continuing commitment to the mission of ASPB. Next up are the 2012 ASPB annual meeting in Austin (July 20–24) and the National Association of Biology Teachers meeting in Dallas (November 1–3). We rely heavily on local volunteers to conduct these outreach events and hope that ASPB members in Texas will pitch in to help later this year. You won't regret it! ■



Tom Bryan helps visitors create Mother of Thousands necklaces.

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Phibus Matile, 1985



Phibus Matile, 2011
(source: Giorgio Zehnder)

Philippe Matile (1932–2011)

BY STEFAN HÖRTENSTEINER
University of Zurich, Switzerland

Philippe (Phibus) Matile, emeritus professor at the University of Zurich, Switzerland, passed away October 29, 2011, at the age of 79.

Phibus's youth was influenced by the troubling times of World War II, which even though not directly involving Switzerland, affected daily life considerably. After attending high school in Zurich, Phibus was indecisive as to which direction of further education to choose. He found the biology lessons at the high school extremely boring and would never have imagined becoming a biologist. He finally decided to attend the courses at the Abteilung X of the Swiss Federal Institute of Technology (ETH) of Zurich (the department

at the ETH he later headed), where he was taught in different science topics with the aim of becoming a school teacher. During these studies, he realized his interest in biology and moved to the Department of General Botany of the ETH, where he obtained his PhD in 1956 under the supervision of Prof. Albert Frey-Wyssling. Frey-Wyssling was a specialist in the ultrastructural cytology of plants, but Phibus was more inspired by the physiological and analytical methods he learned from Martin H. Zimmermann, an assistant in Frey-Wyssling's group, who later was appointed Charles Bullard Professor for Forestry at Harvard University and director of the Harvard Forest.

Phibus's PhD work dealt with nectar secretion of ephemeral flowers, a scientific topic to which he returned after his retirement in 1998. Thus, not surprisingly, his last scientific paper, published in 2006 in the same journal as his PhD work 50 years earlier (*Botanica Helvetica*, formerly *Berichte der Schweizerischen Botanischen Gesellschaft*), allowed him, as he said himself, to "close the circle of my scientific life."

Frey-Wyssling had expected Phibus to spend some years of postdoc abroad, the usual procedure toward a scientific career, which in Swiss German was termed *IAX* (*in Amerika xi*, "having been in America"). Phibus, however, had other plans. In 1956, he married Christine Lutz and moved to Florence, Italy, for three years as a teacher at the Scuola Svizzera. After returning to the ETH as an assistant in Frey-Wyssling's group in 1959, Phibus worked on the influence of light on respiration in plants and yeast. In 1962, he submitted his habilitation in the area of plant physiology. With a two-year scholarship from the Swiss National Science Foundation, he went to the Cytology Department of the Rockefeller Institute in New York in 1963. Phibus joined the group of Prof. George E. Pallade, who received the Nobel Prize in Physiology and Medicine in 1974 for his innovations in electron microscopy and cell fractionation. Although Phibus felt a bit lost between all the coryphées surrounding him at the Rockefeller Institute, his New York years inspired him to develop his own research

direction on lytic processes in fungi and plants. In 1964, he returned to the ETH as an assistant professor. He was promoted to extraordinary professor in 1967 and to full professor in 1970.

Phibus was the first to describe fungal lysosomes and plant vacuoles as the subcellular storage compartments for hydrolytic enzymes. His work delivered physiological explanations for the multitude of cellular degradation processes occurring during leaf and flower senescence. This pioneering work culminated in the publication of a renowned textbook in 1975, *The Lytic Compartment of Plant Cells*. A second milestone in Phibus's scientific career was the elucidation of the pathway of chlorophyll breakdown. Phibus started to work on this topic in 1980, after a meeting with Robert F. Troxler, a porphyrin chemist from Boston University, whom he asked: "What is known about natural chlorophyll breakdown?" Troxler answered: "Nothing," and even seven years later, the mechanism of chlorophyll breakdown was termed a biological enigma. Phibus established intense collaborations with two scientists who became very close friends as well: Bernhard Kräutler, an organic chemist at that time at the ETH, now professor in Innsbruck, Austria, and Howard (Sid) Thomas, from Aberystwyth, Wales, who had identified a famous fescue mutant that turned out to be deficient in Gregor Mendel's green cotyledon gene, required for the initiation of chlorophyll

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Helen Stafford [biology 1954–1987] was the first Reed professor to win a Guggenheim Fellowship.

This article originally appeared in *Reed Magazine*, Vol. 90, No. 4: December 2011. It is reprinted with permission.

Helen A. Stafford (1922–2011)

Helen's interest in plants first blossomed when she gardened beside her father in Philadelphia. "My father was an avid gardener but he had to do everything himself. I was allowed to help him. My father got sick one year and I had to then plant the seeds myself. That just started it all." Her interest deepened at Wellesley College, where she studied plant physiology, earning a BA in 1944. "Some-

body came to give a seminar talk about metabolic biology and I got excited about it. That's why I like tissue culture, I still like to watch things grow." A career in science was not easy for a woman at that time, but Helen was encouraged by her mentors at Wellesley and Cornell, where she worked as a research assistant. She earned a master's degree from Connecticut College for Women for her groundbreaking thesis on

the development of anatomical structures and the effect of light on timothy grass seedlings. Her thesis was published in the *American Journal of Botany*, the first of more than 70 publications over her career.

To pursue her PhD, Helen went to the University of Pennsylvania; prejudice nearly prevented her from teaching botany to male students, but she persevered, teaching the course and earning a doctorate in 1951 for her discoveries about plant enzymes. Helen went to the University of Chicago as a postdoctoral scholar; meanwhile, her exemplary record of research, publishing, and teaching impressed Lewis Kleinholz [biology 1946–80], who recognized how much she could strengthen the department at Reed. She arrived on campus in 1954 as the only female faculty member in the division of mathematics and natural sciences.

It was a tumultuous time: President Duncan Ballantine [1952–54] resigned her first year, and department chair Ralph Macy [1942–55] the next. Biology was the smallest department at the college, and Helen was challenged by the limited facilities available in the basement of Eliot Hall. Helen began lobbying for grants from the newly organized National Science Foundation and National Institutes of Health—both helped provide resources for research. She and her colleagues worked to integrate classroom teaching with vigorous research by both faculty and students, and transformed the department into one of the top biology programs in the U.S.

Helen was the first Reed professor to win a Guggenheim Fellowship, which she took at Harvard in 1958. She received unbroken funding of her research from NSF for over 30 years. She also was a member of the reviewing panel for requests for NSF research grants in plant physiology. Her stature within her field led to her serving as commissioner of the Committee for Undergraduate Education in Biological Sciences, and as president of the Phytochemical Society of North America. She was a member of the editorial board of *Plant Physiology* for nearly 30 years and editor of *Recent Advances in Phytochemistry*.

Helen retired in 1987. Three years later, she published *Flavonoid Metabolism*, a definitive textbook providing a comprehensive review of the biosynthesis and catabolism of flavonoids and their regulation in plants. In 1996 she received the Charles Reid Barnes Life Membership Award from the American Society of Plant Physiologists—the first woman to receive the honor. "Professor Stafford has a most well deserved international reputation, a fact all the more striking given that essentially all of her research was conducted at an undergraduate institution," wrote Norman Lewis, director of the Institute of Biological Chemistry at Washington State University. "Her numerous scientific contributions can be characterized not only as incisive and truly creative, but also ahead of their time. Her studies were superbly conceived, brilliantly executed, and represent a significant and lasting contribution." Professor David Dalton [biology 1987–] stated that Helen helped

design the highly successful and distinctive attributes for which the Reed biology department is known. “Her career has been a model that demonstrates that it is possible to be successful and productive with research in a setting that strongly emphasizes teaching.”

Helen was a pioneer in many ways. Declining the role of firebrand, she worked tirelessly as a mentor and role model for the next generation of women scientists. “We all loved dinners at her house,” wrote Pam Ronald

’82. “I remember that she was a bit annoyed at us vegetarians. ‘Plants have feelings, too,’ she would say.” “She was a great scientist and a wonderful person,” wrote Jerry Marshall ’82, who was Helen’s thesis student. On the subject of teaching, Helen stated, “I have learned to appreciate how deeply students need encouragement, as well as, say, expertise. Typically required to work harder than ever before, expected to comprehend unfamiliar and often difficult subjects, obliged to compete with

their peers for the first time, and usually subjected to severer criticisms than ever before, students deserve, not merely need, encouragement.” Even as she faced the onset of Alzheimer’s, Helen continued to exhibit the courage and curiosity she was known for with the help of devoted friends and caregivers. A lover of the outdoors and of the dogs who were her constant companions, Helen found a true home in the Pacific Northwest. Ever frugal, she was able to endow the Morton O. Stafford Jr.

Scholarship at Reed in memory of her brother, who was killed in World War II. Helen is survived by her niece, Anne W. Scarff of Amherst, Massachusetts, who provided many of the details for this memorial piece. She was predeceased by her parents; brother; and sister, Marie Louise S. Scarff. Helen died August 12, 2011, at her home in Portland, following a long struggle with Alzheimer’s disease. Her ashes have been scattered in the Reed canyon. ■

PHIBUS MATILE

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breakdown. Together with Bernhard and Sid, Phibus succeeded in identifying natural degradation products of chlorophyll and elucidating the complex biochemistry of chlorophyll breakdown. In 1985, Phibus left the ETH and followed a call from the Institute of Plant Biology at the University of Zurich, where he continued his research on chlorophyll breakdown until retirement in 1998.

Phibus was a member of several scientific organizations, such as the German National Academy of Sciences Leopoldina and the Academia Europaea, and he was an honorable member of the Swiss Society of Plant Physiology, a member of the Swiss National Research Council, and a corresponding member of ASPB.

Even though he doubted it again and again, Phibus was a dedicated teacher and mentor, who fascinated and inspired generations of students and co-



Phibus invented the “bud,” the Swiss quality logo for food produced by organic agriculture.

workers. About 50 PhD students passed his “school”; several of them are now successful Swiss plant scientists, such as Thomas Boller, Enrico Martinoia, and Andres Wiemken, just to mention a few. Not only in this respect was Phibus an important promoter of plant science in Switzerland, but also in the late 1990s, his input was decisive for the continuation of the Institute of Plant Science at the University of Zurich, and he participated in the foundation of the precursor organization of the extremely successful Plant Science Center between the

ETH and the Universities of Zurich and Bale. Furthermore, he was a cofounder of the Swiss Foundation for the Promotion of Organic Agriculture, which established the internationally renowned Research Institute of Organic Agriculture (FiBL). The “bud” he invented as the logo for FiBL is now omnipresent on food packages in Switzerland to indicate organic production according to the strong guidelines of Bio-Suisse, the umbrella organization of organic agricultural organizations in Switzerland.

Phibus’s interests were not restricted to science. He was an inquisitive reader and a multitasking artist, craftsman, and musician. He was a skillful painter and produced his own pigment colors based on plants and minerals. The wooden toys Phibus made were well known,

and he was invited to many exhibitions, among them the Swiss foundation Pro Helvetia’s traveling “Handmade Toys from Switzerland” exhibit on the occasion of the United States bicentennial celebrations in 1976.

During the last interview with Thomas Alfödi from FiBL in April 2011, Phibus said: “Once I am dead, the bud will be the most visible track of my life.” This might be true, at least in Switzerland, but this cannot neglect all the other tracks of the diverse and fulfilling life he leaves behind.

Phibus died unexpectedly October 29, 2011, from cardiac arrest during a meeting with old friends and colleagues. He is survived by his wife, his three children, and four grandchildren. ■

Professor David Alan Walker, University of Sheffield, died on February 13, 2012. A tribute to Prof. Walker by Richard Leegood and Christine Foyer will appear in the September/October 2012 issue of the *ASPB News*.

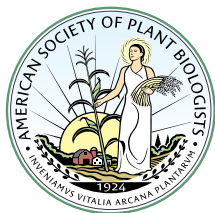
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