

ASPB MIDWESTERN SECTION NEWSLETTER

Winter 2015
Volume 1, Issue 2



States included: IA, IL, IN, KS, KY, MI, MN, MO, ND, NE, OH, OK, SD, WV, WI Canada - MB, ON

Join us in St. Louis for the Midwestern Section Annual Meeting this March 2015

The 2015 Midwestern Section annual meeting will be held March 21–22 at the Donald Danforth Plant Science Center in St. Louis, Missouri.

The agenda includes a keynote address by Scott Peck, Associate Professor of Biochemistry at the University of Missouri. The Peck lab uses proteomics as a tool to investigate cellular responses such as protein post-translational modifications and protein secretion to investigate molecular responses that would be missed by other methods. As two examples, Dr. Peck will discuss work in his lab to investigate responses in Arabidopsis to bacterial infection and responses in maize roots to water deficits.

Also featured will be Sona Pandey, Principle Investigator at the Danforth Center. Dr. Pandey's lab focuses on heterotrimeric G-protein mediated signaling and plant adaptive responses and mapping ABA signaling networks in plants using comprehensive -omics approaches.

[Registration](#) and [abstract submission](#) are now open. The abstract submission deadline is February 27, 2015 (11:59 p.m. EDT). All abstracts submitted by the deadline will be included in the program book and will be considered for talks. Abstracts submitted after this date will not be printed or considered for a talk. Abstract submission will close on March, 14 2015.

Graduate students and undergraduate students are strongly encouraged to present their research. A limited number of Travel Awards are

INSIDE THIS ISSUE

ASPB Midwestern Section Annual Meeting	1
Membership in the ASPB Midwestern Section	2
Five questions with...	2
NABT 2014 Cleveland: MW Meeting for Science Education	3
MW Section Researchers 'Fly' Their Experiment	4
Accolades Section	4
Positions Available	5
Announcements	5

available for student section members traveling a long distance. For more information on applying for a travel award, please visit: [MW Section Travel Award](#) The deadline to apply for a Travel Award is February 6, 2015, 8pm EST.



The Donald Danforth Plant Science Center in St. Louis, MO.



St. Louis skyline with the Gateway Arch.

Membership in the ASPB Midwestern Section

All faculty, postdoctoral and student plant scientists in the Midwest region are encouraged to become a member of the ASPB Midwestern Section. The cost to join is only \$5. Your contribution helps supplement the cost of the MW section annual meeting, supports the travel and presentation awards for MW student members, and also ensures you will continue to have access to our quarterly newsletter. You can [join the Midwestern section only](#) or include a sectional membership when you [join the ASPB for 2015](#).



Missouri Botanical Garden in St. Louis.

States Included in the Midwestern Section are as follows: U.S. – IA, IL, IN, KS, KY, MI, MN, MO, ND, NE, OH, OK, SD, WV, WI, and Canada – MB, ON.

Five Questions with Midwest Section member...

Darron Luesse, Associate Professor and Assistant Chair of Biological Sciences at the Southern Illinois University, Edwardsville. Darron is also our current Chair of the ASPB Midwestern Section.

1) What is your favorite thing about living and working in the Midwest? I've always lived in the Midwest, never making it farther West than Columbia, MO or farther East than Athens, OH. I really like the seasons. While summer and winter may be miserable at times, they make me appreciate spring and fall. And as someone who has no patience for traffic, I enjoy living somewhere without a very high population density.

2) What has been the benefit to you of belonging to the Midwestern section of ASPB? I attended my first Midwestern section meeting when I was in graduate school. As a student it was a great opportunity for me to present my work at a conference, and it served as great preparation when I got to present at the national meeting a few years later. Now as a faculty member, the Midwestern section meeting is a great venue for my own Master's and undergraduate students to present their research. I bring as many as I can to the meeting every year, and they always leave far more excited about science than they were when they arrived.

3) Who or what has inspired your work the most? This is a difficult question for me because I don't typically consider myself an "inspired" person. The top of the list would probably be my parents, because they instilled in me the work ethic that makes the "science



"...the Midwestern section meeting is a great venue for my own Master's and undergraduate students to present their research."

life" a possibility for me. I also see a lot of influence from my Ph.D. advisor (Roger Hangarter) and my Post Doc advisor (Sarah Wyatt) in the way I design my experiments and the way I present the results.

4) What projects are you excited about working on in the future? Right now I'm most excited about the space flight experiment I'm currently working on with my former Post Doc advisor Sarah Wyatt. We're sending some seedlings to the International Space Station in (hopefully) December for proteomic analysis. In the future, I'm excited to get the results back from this flight and see what type of genes we discover, and the new hypotheses they will inspire.

5) What is one of your hidden talents? I can change many light bulbs without a stool (Darron is quite tall!), juggle, and name all 50 states in about 17 seconds.

NABT 2014 Cleveland: Midwest Meeting for Science Education Mastery

VALERIE HAYWOOD
Case Western Reserve University

The National Association of Biology Teachers (NABT) held their Professional Development Conference November 12-15th, 2014 at the Cleveland Convention Center in Ohio. The conference included teachers from across the country, ranging from K-12 to undergraduate educators. The event featured several renowned speakers including the Nobel laureate Stanley Pruisner, as well as Erin Dolan, Executive Director of the Texas Institute for Discovery Education in Science, Editor-in-Chief of CBE-Life Science Education and past Chair of the ASPB Education Committee.

The ASPB Education and Outreach booth was among the many exhibitor displays at the conference. Scott Woody, Associate Scientist at the University of Wisconsin-Madison and member of the ASPB Education Committee, served as booth manager, directing all booth logistics and coordinating content dissemination between booth volunteers and visitors. Scott showcased a collection of Fast Plants-self-compatible (FPsc) genetics education resources including both living plants and hands-on educational tools useful to demonstrate fundamental genetic concepts. See fpsc.wisc.edu/ for more information as well as "The Mating Game" companion piece.

Scott Woody demonstrating "The Mating Game" to visitors at the ASPB Education and Outreach booth.



Also on display were many of the valuable plant biology educational materials developed by members of the ASPB. Sally Sunflower helps students explore plant life in "My Life as a Plant", an engaging activity book that provides younger elementary-grade students the opportunity to explore fundamental concepts in plant biology. Another activity on offer to visiting teachers challenges young students to identify how many plants are used to build a fast-food burger. Upper-level educational resources included, among many others, a module for constructing a dye-



Four of the fabulous ASPB booth volunteers (l-r): Juliana Medeiros (Holden Arboretum) and Becky Summerfield (Cleveland Botanical Garden) and ASPB/NABT dignitaries, Jane Ellis (NABT President-Elect) and Janice Haldeman (NABT 2014 award winner).

sensitized solar cell using fruits and vegetables to demonstrate electron transfer (like many ASPB resources, these are published in both English and Spanish).

Despite the treacherous winter conditions, ASPB members from the Cleveland area were out in full force (has a little snow ever deterred a true Midwesterner?). Booth volunteers included ASPB members from Case Western Reserve University, the Cleveland Botanical Gardens, the Holden Arboretum, and Oberlin College. Also joining the Midwest cast of volunteers was Jane Ellis, former Chair of the ASPB Education Committee and incoming President of NABT, and Janice Haldeman, ASPB member and winner of this year's [NABT Four-Year College & University Section Biology Teaching Award](#).

It was wonderful to see so many ASPB members join together, and especially encouraging to witness the ways that the ASPB promotes cross-pollination among the organizations whose mission is to improve awareness of plant biology through education.

To learn more about the ASPB Education and Outreach efforts, please visit the following link: <http://my.aspb.org/?page=Education>. To volunteer at a future event, contact Katie@aspb.org.

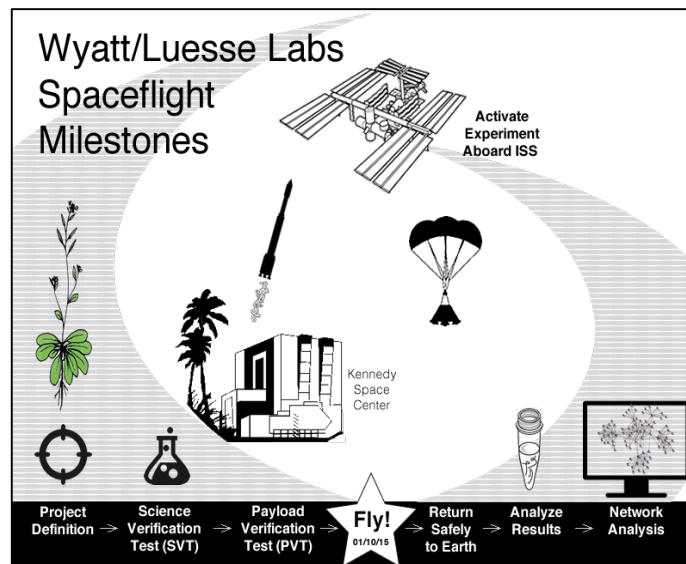
ASPB warmly thanks the 'local talent' who worked with Scott and each other to share their time, energy, and expertise with booth visitors. Kudos for a successful collaboration to:

Renata Brown (Cleveland Botanical Garden)
David Burke (The Holden Arboretum)
Christopher Cullis (Case Western Reserve University)
Valerie Haywood (Case Western Reserve University)
Marta Laskowski (Oberlin College)
Juliana S. Medeiros (The Holden Arboretum)
Emily S Rauschert (Cleveland State University)
Rebecca Summerfield (Cleveland Botanical Garden)

Midwest Section Researchers ‘Fly’ Their Experiment

SARAH WYATT
Ohio University

Darron Luesse (Southern Illinois University, Edwardsville, current Chair ASPB–MW) and Sarah Wyatt (past Chair ASPB–MW and current ASPB–MW Section Representative) will be launching an experiment this January. The team will fly approximately 15,000 Arabidopsis seeds on a BRIC (Biological Research in a Canister) experiment to the International Space Station. Once on orbit, the seeds will germinate and grow for 3 days. The team, including 3 M.S. students and one undergraduate, plans to perform a full proteomics analysis of the space flown seedlings to determine differences in soluble and membrane bound proteins and post-translational modifications that occur in the spaceflight experiment. They are working with the spaceflight team at Kennedy Space Station in Florida and the NASA GeneLab initiative at NASA Ames Research Center in California. For many



of the students this is a “once in a lifetime” experience, but hopefully not for Wyatt and Luesse.

The SpaceX Falcon 9 rocket carrying BRIC-20 successfully launched on January 10th and is scheduled to dock with the ISS on January 12th. For more information on the spaceflight research, visit [space-experiment](#) and [cargo-laden-chase-of-station](#).

Accolades Section

Sruthi Narayanan, a Ph.D. student in the laboratory of Dr. Vara Prasad, Department of Agronomy at Kansas State University, won first place in the C2 Division (Crop Physiology and Metabolism) Graduate Student Oral Competition at the annual meeting of the Crop Science Society of America held in Long Beach, California, Nov. 2–5, 2014 for her oral presentation titled “Membrane Lipid Composition Under High Temperature Stress in Wheat.” As part of her prize, Sruthi received a copy of the textbook “Principles of Soil and Plant Water Relations, 2nd ed.,” by M. B. Kirkham (2014, Elsevier/Academic Press). The text was donated by Elsevier/Academic Press and presented by Ofelia Chernock, Portfolio Marketing Manager of Elsevier Science and Technology Books.

Xuan Lu, a Ph.D. student of Plant Biology in the laboratory of Dr. Reuben Peters, Department of Biochemistry, Biophysics & Molecular Biology at Iowa State University, recently had his work published in *New Phytologist*. His paper, “An *ent*-kaurene-derived diterpenoid virulence factor from *Xanthomonas oryzae* pv. *Oryzicola*” (2014) describes work that Xuan presented at the ASPB Midwestern Annual meeting in both 2012 and 2013. To read the full article, visit:

<http://onlinelibrary.wiley.com/doi/10.1111/nph.13187/full>



Have you paid your \$5 dues to become a member of Midwestern Section of ASPB? If you are not already a 2015 member, join [here!](#)

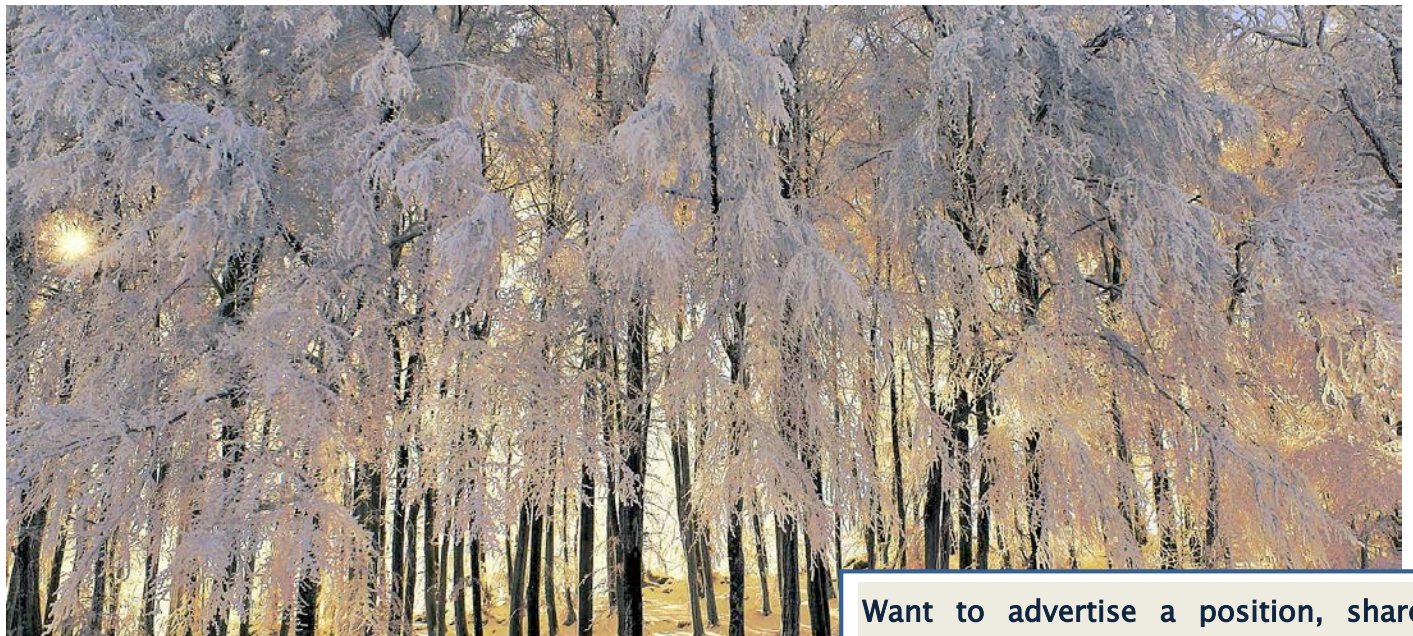
Douglas Fir from “My Life as a Plant”
Jones, A.M., and Ellis, J. (2012). My Life As A Plant. Rockville, Md.: ASPB

Positions Available

Graduate Assistantships in Plant Biology, Ohio University: Research and teaching assistantships are available to study plant responses to gravity. The major goal of the research is to characterize the signal events that confer the gravitropic signal. The successful candidate must be accepted to the [Environmental and Plant Biology Graduate Program](#) at Ohio University, but may participate in the interdisciplinary [Molecular and Cell Biology Graduate Program](#). Positions are available starting in Fall 2015, ALL application materials must be received by January 15th, 2015 for first consideration. For more information contact Dr. Sarah Wyatt, Environmental and Plant Biology, Ohio University at wyatts@ohio.edu

Announcements

IPG Annual Meeting, University of Missouri: We are The Interdisciplinary Plant Group (IPG) at the University of Missouri (MU) will hold its annual symposium from May 27 – 29, 2015 at the MU campus in Columbia, MO. This year's symposium, "Plants Between a Rock and a Hard Place: The Interface Between Abiotic and Biotic Stress Responses", will emphasize the integration of stress responses by plants. The goal of the meeting is to foster greater awareness and identification of gaps in knowledge that will need to be addressed by multi-disciplinary, collaborative research teams. More information can be found at: www.ipg.missouri.edu/symposium.



Want to advertise a position, share some exciting news, or be featured in our next newsletter? Please send items to Valerie Haywood by April 1, 2015: vxh20@case.edu