APS Think Tank Spurs Innovative Questions to Advance Plant Pathology

Keeping a pulse on critical scientific gaps in plant pathology is key to ensuring our continued progress in addressing the grand challenges facing the world. APS is invested in “Minding the Gaps” and in an effort to do just that it recently organized a special Think Tank meeting held at headquarters, May 12–13, 2013, which brought together broad perspectives from members and guests to outline the current state of the science and the gaps that exist—the real impediments to us making progress—and to inform the development of strategies to address these gaps.

APS President Mike Boehm initially contacted several key members to seek their input on establishing a meeting with this focus and received overwhelming support as well as a notable list of recommendations for participation. Based on this input, an impressive response was received. Participants included President Boehm along with Gwynn Beattie, Iowa State University; Adam Bogdanove, Cornell University; Amy Charkowski, University of Wisconsin; Margo Daub, North Carolina

Think Tank continued on page 98

Kindle Edition of Hungry Planet Now Available at Amazon

Hungry Planet: Stories of Plant Diseases—named a “Choice Outstanding Academic Title” for 2013—is now available for Kindle and iPad from Amazon. The e-book edition links directly to the APSnet Education Center, where students will find free resources, including the image gallery, podcasts, review questions, group discussion topics, demonstrations, and lab exercises.

This fascinating APS PRESS book examines the effects plant diseases have had on human culture by weaving together true-life tales from ancient days and modern times. Hungry Planet explores sometimes controversial topics that challenge readers to think beyond the disease outbreaks to consider the impact these biological events have on our personal lives. It helps students become more aware of the importance of plants and agriculture in their everyday lives and the challenges of providing food, fiber, and fuel for a growing population. It teaches basic biological concepts within a framework of stories of plant diseases.

Student resources for each chapter of Hungry Planet are readily available via direct links from the Kindle edition. Instructors who select this textbook for course adoption will be given login and password information to access the online resources. Like the student materials, the instructor resources are organized by chapter and include demonstrations and desktop lab exercises, group discussions, and writing assignments.

In this Issue

Editor’s Corner ......................... 90
Letter to the Editor ....................... 90
Outreach ................................. 92
Public Policy Update ................... 93
APS Foundation ....................... 94
People .................................. 96
Classifieds ............................... 98
APS Journal Articles .................. 99
Calendar of Events .................... 100

Sally A. Miller, The Ohio State University (OSU), has been elected vice president of APS (to serve as president in 2015–2016) and Eric C. Tedford, Syngenta, was elected councilor-at-large for a three-year term. Both officers will begin their terms following the 2013 APS-MSA Joint Meeting in Austin, TX. Miller is a professor in the Department of Plant Pathology at OSU, specializing in vegetable disease management, diagnostics, international research and development, and food safety. Tedford serves as technical product lead, fungicides, at Syngenta, where he focuses on the research and development of fungicides for agriculture. Complete biographic sketches, as well as personal statements of leadership, appeared in the May 2013 issue of Phytopathology News (Vol. 47, No. 5).
Editor's Corner

A Tale of Two Besseys
Doug Jardine, Kansas State University, PhytoNewsEditor@scisoc.org

It’s interesting how many land-grant university campuses share buildings with the same names. For instance, I could find at least 15 campuses with buildings named after Justin Morrill, who championed the legislation through Congress that created the land-grant system. Sometimes land-grant buildings have the same name, but are actually named for different people. At my alma mater, Michigan State University (MSU), Kedzie Hall, the chemistry building, was named after Robert C. Kedzie. Here at Kansas State University (KSU), there is also a Kedzie Hall. This building, however, was named after Nellie Kedzie, who was the head of KSU home economics in the late 1800s.

Another familiar building name from the MSU campus was Bessey Hall. There is another Bessey Hall at Iowa State University (ISU) that is the home of the Department of Plant Pathology. In between Ames and Manhattan (sort of), the University of Nebraska-Lincoln (UNL) also has a Bessey Hall that houses the Department of Geosciences and the Geology Library. I had always assumed, being land-grant colleges, they were all named after the same Bessey. Turns out, I was wrong. This revelation came as I was scanning the roster of charter members of APS and noted that there were two Besseys on the list, C. E. Bessey and E. A. Bessey.

Charles E. Bessey graduated from the Michigan Agricultural College (MAC, now MSU) in 1869 with a degree in botany. He served as professor of botany at Iowa Agricultural College (now ISU) from 1870 to 1884. In 1884, he moved to UNL where, over the next 30 years, he served as professor of botany and head dean and three terms as chancellor of the university. He was also president of the American Association for the Advancement of Science in 1911. Nebraska’s Bessey Hall was opened in 1916, just one year after his death. In addition to the building, you will also find on campus the C. E. Bessey Herbarium, and in the Sandhills area of the state, there is the C. E. Bessey Tree Nursery, which is part of the USDA’s Dismal River Forest Preserve. Lee Campbell, Paul Peterson, and Clay Griffith devote several pages to Bessey in their book, The Formative Years of Plant Pathology in the United States (available from APS PRESS). Bessey’s contributions to plant pathology generally consisted of publications on plant disease control.

Letter to the Editor

Stress Resistance in Wheat

Breeding for resistance might confer resistance to diseases as well. About a quarter of a century ago, the subject of stress resistance in wheat lines came up several times in discussions of cooperative work between the late Professor Zahir Eyal of Tel Aviv University, Israel, and I. We were working on Septoria diseases of wheat then, he particularly on speckled leaf blotch of wheat, caused by *Septoria tritici*, and I on glume blotch caused by *Septoria nodorum* (as the diseases and organisms were then known). In our world-wide cooperative nursery programs, we had examined thousands of lines looking for sources of resistance. We also looked for lines in the various classes of wheat (soft, hard, red, white, winter, spring) that were particularly susceptible to disease in order to include some of them as susceptible checks. We observed that those not able to stand drought or heat were also more likely to be susceptible to disease. Resistance to stress, or lack thereof, was particularly manifested in the survival time of excised leaves cultured on media in Petri dishes. Those lines that stood up well to shortage of water or excessive heat or cold and were long-time survivors in artificial culture also were more likely to stand up well when attacked by disease organisms. This applied not only to the Septorias with which we were most concerned, but also to other pathogens and diseases like powdery mildew; rusts, such as stem, stripe and leaf; and *Wheat streak mosaic virus*. It didn’t matter whether the pathogen was facultative or obligate, whatever was contributing to stress resistance also seemed to confer a generalized resistance to disease. As it happened, I retired and Zahir was struck down by cancer, so we did not have the opportunity to pursue studies of genetic related to stress resistance in wheat or other cereals. Since then, I have looked for reports in the literature of investigations of stress phenomena, but have found none. I expect there are some of which I am not aware, but I hope that this note may stimulate some breeders and/or pathologists to institute and continue the study of stress resistance and its relation to withstanding attacks of pathogens and diseases.

— Albert L. Scharen, Montana State University
Fifth National Plant Disease Recovery System Workshop Held

The USDA Office of Pest Management Policy (OPMP) and The American Phytopathological Society (APS) conducted the 5th National Plant Disease Recovery System (NPDRS) Workshop in Falls Church, VA, on April 15–16, 2013. NPDRS was established on January 30, 2004, per mandate of the Homeland Security Presidential Directive #9 (HSPD-9) to develop recovery plans for high-consequence plant pathogens and diseases that could pose a threat to our food security if introduced into the United States.

More than 60 participants from different sectors of the agricultural community, including federal and state agencies, academia, and industry, were represented. Edward Knipling (USDA ARS administrator) opened the workshop with welcoming comments. Joan Webber (Forestry Commission, Surrey, United Kingdom) presented an international perspective with her keynote address on new pest and pathogen threats to forest trees, such as ash dieback, Asian longhorn beetle, Phytophthora ramorum, and chestnut blight.

New recovery plans reviewed at the meeting included those for thousand cankers disease of walnut, citrus leprosis, bacterial leaf blight and leaf streak of rice, blast of wheat, nematode-incited root knot/cyst, and cotton leaf curl, caused by a virus.

Participants stressed the importance of communicating completed recovery plans to various stakeholders, including policy-makers, agency leaders, extension educators, crop consultants, and growers in the United States and around the globe. This action will be facilitated by the inclusion, in both existing and new recovery plans, of communication plans.

Several new USDA APHIS response guidelines, including those for ash dieback, small banded pine weevil, and Tremex wood wasp, were also presented and discussed.

Speakers from USDA (ARS, APHIS, NIFA, Forest Service, National Plant Diagnostic Network), EPA, and FBI presented up-to-date information on the federal agency activities and domestic programs relevant to HSPD-9. A working group was appointed and charged to refine, validate, and apply a model in the development of generic recovery plans and their potential implementation. Ray Martyn (Purdue University) is the chair with Neil McRoberts (University of California [UC]-Davis), Carla Thomas (UC-Davis), Judy Brown (University of Arizona), Forrest Nutter (Iowa State University), and Jim Stack (Kansas State University) as members.

In the workshop, experts led by Doug Luster (USDA ARS) recommended that the next recovery plans to be developed should include diseases on solanaceous crops caused by ‘Candidatus Liberibacter solanacearum,’ citrus black spot (Guignardia citricarpa), and Cowpea mild mottle virus.

The inclusion of groups of pathogens (as opposed to single pathogens/single diseases) in the plans was proposed for ‘Candidatus Liberibacter’ species transmitted by psyllids, phytoplasmas, plant pathogens infecting human hosts, and viroids. The meeting ended with a discussion of potential activities and functions of NPDRS in the future, with discussion on mechanisms of leadership transitions, possible publication of plans in peer-reviewed journals, and other new elements. Organizers of the workshop were Julius Fajardo (USDA OPMP), Jacque Fletcher (Oklahoma State University), and Stack. PowerPoint presentations can be accessed online at www.apsnet.org/meetings/topicalmeetings/NPDRS.

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APS-MSA Joint Meeting Industry & Extension Social

Exceptional Networking at One of Austin’s Premier Entertainment Venues

This year’s Industry & Extension Social is being held at Speakeasy, Austin’s original “swanky joint.” Join your industry and extension colleagues and friends Monday, August 12, at one of downtown Austin’s most celebrated event and entertainment venues. Located in the heart of the Austin Warehouse District and easy walking distance from the convention center, Speakeasy features a Roaring Twenties vibe, breathtaking views from the rooftop lounge, free vintage bowling lanes, a full-size pool table, karaoke room, and much more. APS and MSA have reserved the entire venue for this event, so don’t miss this fantastic opportunity to enjoy one of Austin’s most popular venues and connect with key industry and extension colleagues. Pre-register for this not-to-be-missed event at www.apsnet.org/meet.
The APS Committee for Diversity and Equality Presents “Networking: YOU Take the Lead”

Join us for this fun and informative event at Micheladas Café & Cantina on Tuesday, August 13, 2013, from 5:30 to 8:30 p.m. at the APS-MSA Joint Meeting in Austin. This event and social will provide a great opportunity for interactive discussions and networking with students, early career professionals, and established scientists in an informal setting. Pre-registration is required. The cost of the event includes appetizers, but a cash bar will be available.

Outreach

APS Heads to the MANRRS Career and Training Conference

The 28th Annual Career Fair and Training Conference organized by the national Society of Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS) was held in Sacramento, CA, on March 21–23, 2013. APS members Carolee Bull (USDA) and Luisa Santamaria (Oregon State University) attended this meeting, representing the Office of Public Relations and Outreach (OPRO).

The career fair took place on March 22. Participants attending this meeting were mainly undergraduate students in different fields of the agricultural sciences, looking for information about graduate schools or internship opportunities. The APS T-shirts—with the phrase “Don’t get caught with your plants down”—attracted most of the visitors to the APS booth, as they all wanted to get one. We immediately approached them to enter the T-shirt raffle, and this interaction allowed us to initiate a conversation. The next immediate question was about the meaning of APS and if this organization offered internships. We explained the importance of a professional organization such as APS, the benefits of joining, the career possibilities in plant pathology, and the universities that have a program in this discipline. Some of them were very motivated and started to think about enrollment in a plant pathology program. As a result, one undergraduate student signed up as a new member of APS.

The most popular brochures were those providing information on how to apply for graduate school and the universities that have a plant pathology program. Bull brought interesting material developed for her laboratory—Petri dish soap, which looks like a real Petri dish with bacterial growth. This engaging material helped us initiate conversations about plant pathogens and show them how bacteria look (in a safe way). It was a great attraction. A few teachers stopped at the booth and received a teacher package regarding plant pathology. The booth and all the informative materials about APS were very well received.

APS Spreads the Word About Plant Pathology at NCUR 2013

Michelle Grabowski (University of Minnesota) and Renee Rioux and Anna Seidl (University of Wisconsin, Madison) represented APS at the National Conference on Undergraduate Research (NCUR), April 11–13, 2013, in La Crosse, WI. NCUR is dedicated to promoting research, scholarship, and creative activity in all fields of study. Advanced undergraduate students from universities and colleges across the United States attend to present original work through posters, oral presentations, or performances. APS hosted a table in the Graduate and Professional School Fair, held in the same room as the poster presentations. At the fair, we were able to talk to students who were drawn to the booth by the exciting displays as well as seek out students with research posters relevant to plant pathology. Poster topics included studies on Phytophthora ramorum, Trametes versicolor, mycorrhizae, and much more. Many students stopped by to ask what plant pathology is, opening the door to great conversations on a variety of plant-pathology-related topics. Two students stopped to say “hello,” letting us know that they were already enrolled in plant pathology graduate programs and wanting to learn more about the society.

Organics Symposium Launched on the Plant Management Network

The USDA’s first-ever Organic Farming Systems Research Conference took place in Washington, DC, March 16–18, 2011, to examine the agronomic, economic, ecological, and quality-of-life performance of organic farming systems. A written proceedings of this conference has been launched on the Plant Management Network’s (PMN’s) Crop Management journal, located at www.plantmanagementnetwork.org/pub/cm/symposium/organic/farm. This fully open-access collection of research, reviews, and perspectives provides a diverse discussion around organic farming systems in the United States. While presentation topics run the gamut of dimensions, from the agronomic and economic to the ecological and social, the information in these proceedings primarily benefit researchers and agricultural practitioners involved with organic farming systems.

PMN, www.plantmanagementnetwork.org, is a nonprofit publisher of applied crop management information. Together with more than 80 partnering organizations, PMN achieves its mission: to enhance the health, management, and production of crops through quality, science-based information.
New Senior Editors for APS PRESS, *Plant Disease*

**Bob Harveson**

APS PRESS welcomes Bob Harveson to the editorial board as a senior editor. Harveson is a professor in the Department of Plant Pathology at the University of Nebraska. He obtained a B.A. degree in history from Trinity University in 1983 and a B.S. degree in plant/soil science from Tarleton State University in 1985. In 1989, he received an M.S. degree in plant pathology from Texas A&M University and then started and managed a new plant disease diagnostic clinic for the University of Florida at the Southwest Florida Research and Education Center in Immokalee. From 1991 to 1995, he worked as a research associate with Texas A&M in Amarillo, investigating diseases of sugar beets. He received his Ph.D. degree in 1999 from the University of Florida. He began his current appointment at the Panhandle Research and Extension Center, Scottsbluff, in that same year as an assistant professor and was promoted to associate and full professor in 2005 and 2010, respectively. His work involves 50% research and 50% extension, with programming responsibility for specialty crop diseases. His research program focuses on the etiology and applied management of sugar beet, dry bean, and sunflower diseases. He has previously served as an associate editor and senior editor for *Plant Disease*.

**Inga A. Zasada**

Inga A. Zasada, a research plant pathologist with the USDA ARS Horticultural Crops Research Laboratory in Corvallis, OR, has joined the *Plant Disease* Editorial Board as a senior editor. She earned a B.S. degree in crop science from Oregon State University (OSU) and an M.S. degree in crop science from North Carolina State University. After finishing her M.S. degree, she served as a Peace Corps volunteer in Malta, where she was first introduced to the wonderful world of nematodes. Having discovered a passion for nematology, Zasada pursued a Ph.D. degree in plant pathology under the tutelage of Howard Ferris, earning her degree in 2002. From 2003 to 2008, she was a research plant pathologist with the USDA ARS Nematology Laboratory, Beltsville, MD. Her research focus there was on plant-parasitic nematode management with organic amendments. In 2008, she embraced an opportunity to return to her alma mater and accepted a position in the USDA ARS Horticultural Crops Research Laboratory.

Currently, her research program is directed toward managing plant-parasitic nematodes in small fruit and nursery crops. Specific research interests include biology, taxonomy, and ecology of virus-transmitting nematodes; identification of raspberry, blueberry, and grape resistance to economically important plant-parasitic nematodes; and the development of sustainable nematode-management strategies for small fruit and nursery crops. She has been an active member of APS since 2001, serving on the Nematology Committee and as an associate editor for *Plant Health Progress*. Zasada holds a courtesy associate professor appointment in the Department of Botany and Plant Pathology at OSU.

Editor continued from page 90

1967, ISU named its Plant Industry Building, which houses the Department Plant Pathology, after him.

**Ernst A. Bessey**, was the son of Bessey. He was educated in mycology, botany, and plant pathology at UNL. After working for the USDA overseas and at Louisiana State University, he joined the faculty of MAC in 1910, where he remained until his retirement in 1946. In addition to botany responsibilities, he also served as the acting dean of the Division of Applied Science and dean of the Graduate School. According to Campbell et al., his contributions to plant pathology consisted mainly of work on root-knot nematodes. MSU dedicated E. A. Bessey Hall in 1961. It currently houses, among other things, the university’s Learning Resource Center and many general education classrooms.

On another subject, we will soon be meeting jointly with The Mycological Society of America (MSA) in Austin, TX. APS has a long history of meeting with this particular sister society. As far as I can determine, this will be the 12th time we have met with MSA since 1952. Many of the meetings in the 1950s were held as part of the larger American Institute of Biological Sciences (AIBS) meetings. MSA was founded in 1932 and it is likely there are other times prior to 1952 that we met together under the umbrella of AIBS, but that information was not readily available. This year’s meeting should be another excellent joint venture. Programs and events for the meeting can be found at www.apnet.org/meet.

I will leave you this month with one last departing tidbit of trivia. In addition to being a charter member of APS, E. Bessey was also a charter member of MSA.

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**Public Policy Update**

**LaKisha Odom Wins AAAS Policy Fellowship**

LaKisha Odom, a graduate of the Integrative Biosciences Ph.D. program at Tuskegee University, has been awarded an American Association for the Advancement of Science (AAAS) Science & Technology Policy Fellowship with a placement at USDA.

She was chosen for the fellowship through a rigorous selection process, with more than 850 applicants vying to be among the approximately 130 fellows selected for the 2013–2014 class of scientists and engineers who will spend a year working in federal agencies or congressional offices. The fellows contribute their training and expertise in public service to the U.S. government while learning first-hand about policy-making and implementation at the federal level.

LaKisha Odom will spend the coming academic year at the USDA in the Animal and Plant Health Inspection Service (APHIS) Biotechnology Regulatory Service (BRS), where she will work in the Office of Science, as part of the Office of the Deputy Administrator.

Her doctoral research focused on testing of genetically modified crops transformed with a synthetic antimicrobial peptide D4E1 to assess their impact on soil microbial diversity and enzymatic activity. She is also currently serving as the APS Public Policy Board early career intern, allowing her to participate in the policy decisions of a national professional society.

Odom received her Ph.D. degree in 2011. She also has a master’s degree in environmental resource policy from George Washington University and a bachelor’s degree in environmental science from Tuskegee.

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**Phytopathology News** 93
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APS Foundation
Imana Power Named Raymond J. Tarleton Student Fellow

The APS Foundation is pleased to announce Imana Power as the 2013 recipient of the Raymond J. Tarleton Student Fellowship. Power, a native of Suriname, in South America, is a doctoral candidate under the advisement of Albert Culbreath in the Department of Plant Pathology at the University of Georgia. Her research focuses on characterizing resistance of peanut to Puccinia arachidis Speg, the causal agent of peanut rust. Peanut rust is an important foliar disease of peanut in peanut-producing countries with warm, tropical climates, especially those with low-input production. Her research is part of the UF150 project of the Peanut Collaborative and Support Program of the United States Agency for International Development (USAID). The project is aimed at developing peanut varieties with multiple disease resistance. She combines field, growth chamber, and genetics investigations of the host and pathogen to characterize peanut rust resistance in newly developed breeding lines. The specific objectives are determining levels of field resistance, components of resistance, and phenological resistance in newly developed breeding lines, using rust resistance markers in rust resistant genotypes and assessing the genetic variability among *P. arachidis* populations.

Power’s field studies have identified breeding lines with high levels of peanut rust resistance, of which several lines show multiple disease resistance under high disease pressure. In addition, preliminary results from the sequenced ITS region of geographically diverse *P. arachidis* isolates indicate highly homogeneous population structure of the pathogen.

The R. J. Tarleton Fellowship will be used for additional characterization of the population genetics of the peanut rust pathogen. The funds will be allocated to genotyping the peanut rust pathogen through multi-locus phylogeny and microsatellite markers. This information will lay the groundwork for additional studies of population structure and evolution of the pathogen. Power presented part of her results during the 12th I. E. Melhus Graduate Symposium in Providence, RI, and she will present an update at the 2013 APS Annual Meeting in Austin, TX. After graduating, Power plans to return to her home country and contribute to strengthening agricultural research and education in Suriname.

2013 Schroth Faces of the Future Symposium to Highlight Early Career Professionals in Mycology

Christopher M. Wallis, Early Career Professionals Committee Chair, christopher.wallis@ars.usda.gov

The Schroth faces of the Future Symposium—established through a generous endowment from Milt and Nancy Schroth—is organized by the APS Early Career Professionals Committee with assistance from the APS Foundation and appropriate subject matter committees. The Schroth symposium acknowledges early career professionals, APS members within 10 years of graduation, for forward-thinking research in their field. Each year, the Schroth symposium alternates among six general research topics encompassing bacteriology, nematology, mycology, virology, host-plant interactions, and epidemiology/disease management.

This year’s symposium, “Schroth Faces of the Future: New Frontiers in Mycology,” has presentations by four excellent early career professionals as selected by a panel of experts from the APS Mycology Committee. The speakers for 2013 are Jason Slot, Erica Goss, Jamie Elizabeth Blair, and Marin Talbot Brewer. Each receives an award of $500 to defray travel costs to the APS-MSA Joint Meeting. The symposium is currently scheduled for Wednesday, August 14, 2013, from 1:00 to 3:15 p.m.

Slot is an assistant professor in the Department of Plant Pathology at The Ohio State University (OSU). After obtaining B.A. and M.A.T. degrees from Boston University, Slot received his Ph.D. degree from Clark University in biology under the guidance of David Hibbert. Next, Slot served as an NSF post-doctoral research fellow at Vanderbilt University and then as a research associate before joining the faculty at OSU. Slot specializes in examining the evolution of fungi via high-throughput genomic and proteomic techniques. His research endeavors to examine how fungal communities change in ecosystems over time, with the ultimate goal of understanding the nature of fungal disease emergence.

Goss is an assistant professor in the Department of Plant Pathology and Emerging Pathogens Institute at the University of Florida (UF). After obtaining a B.A. degree in biology at Wesleyan University, she received a Ph.D. degree in ecology and evolution from the University of Chicago. She then served as a post-doctoral researcher with USDA ARS in Corvallis, OR, until joining the faculty at UF in 2011. Her current work examines the introduction and emergence/re-emergence of important *Phytophthora* spp., including *P. ramorum* and *P. infestans*. This work is done with the aim to understand how population genetics and evolutionary approaches can decode why past outbreaks occurred and how researchers can prepare for future challenges.

Blair, an assistant professor in the Department of Biology at Franklin & Marshall (F&M) College in Lancaster, PA, obtained a B.A. degree in biology (Ithaca College) and a Ph.D. degree in biology (The Pennsylvania State University [PSU]) in 2005. Afterward, Blair served as a post-doctoral fellow at PSU and Amherst College before becoming an assistant professor at F&M in 2008. Blair’s research interests lie in measuring oomycete biodiversity in different habitats, including aquatic, forest soil, and agricultural settings. She aims to combine culture-based and metagenomic technologies to enhance our understanding of oomycete ecology and evolution.

Talbot Brewer is an assistant professor in the Department of Plant Pathology at the University of Georgia. After obtaining a B.S. degree in biological science at the University of Cincinnati and an M.S. degree in plant, soil, and environmental science at the University of Maine, Talbot Brewer received a Ph.D. degree in plant pathology and plant-microbe biology at Cornell University in 2011. Her research focuses on understanding the patterns of genetic diversity within species, in particular Didymella bryoniæ and Phoma caricae-papayae, which are fungal pathogens of cucurbits and papaya. She aims to use gained knowledge to infer the sources of *D. bryoniæ* inoculum in watermelon fields, with such information useful in making management recommendations.
**Student Degrees**

Zachary Frederick, who is starting his Ph.D. degree this fall with Dennis Johnson, a professor of the Department of Plant Pathology at Washington State University (WSU), has been selected to receive the prestigious Achievement Rewards for College Scientists (ARCS) Scholarship from the ARCS Seattle Chapter. ARCS Foundation is a national organization of 17 chapters serving 53 of the nation's premier research universities. The Seattle Chapter, founded in 1978, currently supports more than 120 Ph.D. candidates at the University of Washington and WSU. Frederick is a native of New York and received his B.S. degree in agricultural biotechnology in the Department of Natural Sciences, State University of New York at Cobleskill. He then joined Cornell University's Department of Plant Pathology and Plant-Microbe Biology, where he just finished his M.S. degree. For his M.S. degree, Frederick worked on apple scab, which is caused by *Venturia inaequalis*, and investigated the effects of QoI fungicide resistance on apple scab management programs. At WSU, his Ph.D. dissertation research will focus on the disease management of the fungal pathogen *Verticillium dahlia*, the causal agent of *Verticillium* wilt, which is an important disease of both potato and mint for regional growers. Frederick is a member of APS and has published papers on apple diseases and their management.

Aaron Mahoney and Sowmya Ramachandran, Ph.D. students with Scot Hulbert, professor of plant pathology at Washington State University, were recent recipients of the Lindahl Memorial Scholarship. The Lindahl Scholarship was established in 1947 as a memorial to John Lindahl by his children, Viva, James, and John Jr. The scholarship is awarded to students working in a course of study related to wheat research. Mahoney’s Ph.D. research goal is to identify the genetic mechanisms of resistance to *Rhizoctonia* spp. in synthetic wheat accessions. He is hoping to better understand the interplay between the pathogen and its host through molecular and phenotypic analysis. Ramachandran’s Ph.D. project involves the identification and functional characterization of conserved effector proteins from the transcriptome sequences of fungi causing stem rust, stripe rust, and leaf rust and using them to identify corresponding resistance genes from wild relatives of wheat.

**Awards**

Robert Brueggeman, assistant professor in plant pathology at North Dakota State University (NDSU), received a five-year Faculty Early Career Development (CAREER) Award from the National Science Foundation (NSF) for research that examines mechanisms of disease resistance in cereal crops. Brueggeman’s research targets fundamental questions about the function of plant immunity and how to breed or engineer resistance mechanisms that are more resilient to changing biotic and environmental stimuli.

The Ohio Agricultural Research and Development Center (OARDC) at The Ohio State University honored plant pathology faculty Brian McSpadden Gardener, Sally Miller, and Feng Qu with the Multi-disciplinary Team Research Award for their efforts to reduce foodborne illnesses associated with fresh produce. The 11 members of the Vegetable Safety Research and Extension Program were presented with the award by Steve Slack, OARDC director, at the center’s annual conference on April 25 in Columbus. Melanie Lewis Ivey, a research scientist in the Department of Plant Pathology, was also recognized as a key member supporting the team. The award is given every three years to honor research excellence by teams comprised of OARDC scientists from a range of complementary fields. Timothy Frey, a plant pathology graduate student, was awarded third place in the conference’s M.S. Student Poster Competition for his research, “Root-knot nematodes regulate the jasmonic acid pathway in order to suppress host defenses.” Christopher G. Taylor is Frey’s advisor.
Award. The award was presented to Wang by OARDC Director Steve Slack at the OARDC Annual Conference on April 25 in Columbus. The award, which honors outstanding achievements by an OARDC faculty member at the rank of professor, recognizes Wang’s research on molecular mechanisms of host plant resistance. Wang’s work on *Magnaporthe oryzae*, causal agent of rice blast, and *Xanthomonas oryzae* pv. *oryzae*, causal agent of rice bacterial blight, has contributed greatly to the understanding of disease resistance in rice and other systems. Wang codelveloped the first agricultural genomics course at OSU, has advised 10 Ph.D. students, and has hosted numerous visiting students and researchers. Wang’s awards and honors include OARDC’s Junior Faculty Research Award in 2005, APS Fellow in 2012, APS Syngenta Award in 2005, the Chinese National Science Foundation’s Outstanding Overseas Young Scientist Award in 2001, and the DuPont Young Professor Award in 2000.

**New Positions**

Francesca Peduto Hand has joined the Department of Plant Pathology at The Ohio State University as assistant professor, where her responsibilities include extension, research, and teaching with a focus on turf and ornamentals, including greenhouse, nursery, and landscape plants. As an extension specialist, she will develop plant health management programs for Ohio’s floriculture, nursery, and turf industries. Peduto Hand received her Ph.D. degree in plant pathology and an M.S. degree in agricultural sciences and technology from the University of Florence in Italy. From 2009 to 2012, she conducted her post-doctoral research at the University of California (UC)-Davis working in the UC Cooperative Extension program of Doug Gubler. Over the last 10 years, her research used a combination of molecular and field-based techniques to study disease epidemiology, biology, and ecology of fungal and bacterial pathogens associated with grapevines and other economically important fruit crops in both nursery and crop production systems. From this work, she developed detection and control strategies with an emphasis on integrated pest management programs.

The University of Tennessee Institute of Agriculture recently welcomed Parwinder Grewal as the new head of its Department of Entomology and Plant Pathology. He will lead the research, teaching, and outreach programs of some 62 faculty and staff members and graduate students statewide. Grewal had previously been on the faculty of The Ohio State University (OSU) for 16 years. At OSU, Grewal founded and directed the Ohio Agricultural Research and Development Center (OARDC) Research Internship Program, the Center for Urban Environment and Economic Development, and the interdisciplinary OARDC urban landscape ecology program. Grewal was also noted for his pivotal role in revising the entomology curriculum in the face of transitioning to semesters and college reorganization.

**Department Update**

The Department of Crop Sciences at the University of Illinois, Urbana-Champaign, had several graduate students receive degrees who worked in the plant pathology program in the last year. Students receiving M.S. degrees in December 2012 were Yiwen Xiang with a thesis entitled “Optimizing conditions for Fusarium virguliforme, comparing isolates causing sudden death syndrome, and the use of soy milk to culture soybean pathogens” (advised by Glen Hartman); and Fan Yan with a thesis entitled “Identification and characterization of type III secretion inhibitors in *Erwinia amylovora*, the causal agent of fireblight of apple and pear” (advised by Youfu “Frank” Zhao). Students receiving M.S. degrees in May 2013 were Jessica Frohning with a thesis entitled “Evaluation of *Rhizoctonia solani*–*Heterodera glycines* interactions on soybean” (advised by Carl Bradley); Fanglin Lu with a thesis entitled “Phakopsora pachyrhizi growth in tissue of leaves from resistant and susceptible soybean germplasm” (advised by David Walker); Liwei Wen with a thesis entitled “Effect of cover crops on suppressing soilborne diseases of soybean and the association of green stem disorder with anthracnose, charcoal rot, and soil moisture” (advised by Darin Eastburn and Hartman); and Yiwen Xiang with a thesis entitled “Optimizing conditions for production of toxin culture filtrate of *Fusarium virguliforme*, comparing isolates causing sudden death syndrome, and the use of soy milk to culture soybean pathogens” (advised by Hartman).

**In Memory**

Calvin Bruce Skotland passed away March 1, 2013, in Prosser, WA. He was a long-time faculty member of the Department of Plant Pathology at Washington State University (WSU). Cal (as his friends called him) was born on September 30, 1925, in McHenry County, ND, to Jason Engelbert Skotland and Leedina Alice Elenora (Nelson) Skotland. He grew up in Willow City, ND. His involvement with agriculture started at a young age in farm jobs that included working on threshing crews. Cal served in the U.S. Navy during World War II and was honorably discharged on July 18, 1944.

Following his military service, he attended Utah State University on the GI Bill, where he studied wildlife biology. From there he went on to earn his Ph.D. degree in plant pathology from the University of Wisconsin. He frequently spoke with great appreciation for the education he received there, particularly valuing the experience of working with his major professor, Don Hagedorn, and studying mycology with the acclaimed teacher Myron Backus.
Upon graduation, Cal accepted a USDA position to do research on soybean diseases at North Carolina State University. In 1956, he moved to WSU's Irrigated Agriculture Research and Extension Center (IAREC) at Prosser. He was well known domestically and internationally for his research with hops and mint, but he also dealt with diseases of other crops, including grapes and sugar beets. Perhaps as a result of his early exposure to agriculture, he always focused his efforts on projects that contributed substantially to the well-being of Washington farmers. At one point, 40% of the hop acreage in Washington was planted to one of the varieties he selected. He dealt with a wide range of crop diseases caused by fungi, stramenopiles, and viruses, as well as environmentally induced disorders. His work on heptachlor toxicity in hop yards was cited in Wyatt Cone’s contributions to the hop industry. The research greenhouse built using those funds is still in use by scientists at IAREC. Following retirement, he continued to reside in Prosser.

Cal was an avid outdoorsman and was especially passionate in the pursuit of Canada geese and elk. A highlight of each year was his annual hunting trip into the mountains with friends that gave him the chance to use his beloved mules in the pack train. He is survived by his sons Bruce and Gerald and seven grandchildren. He was preceded in death by his wife, Opal, and daughter, Kristie.

His friends, colleagues, and former students remember him as a man of great integrity, devoted to his work and family. His efforts on behalf of Washington farmers and WSU yielded contributions to Washington agriculture that seldom will be equaled.

Classification

Assistant/Associate Researcher in Plant Pathology

The Department of Crops and Agro-Environmental Sciences of the University of Puerto Rico, Mayaguez, seeks applicants for an assistant/associate researcher in plant pathology. This is an academic-year (nine-month) tenure-track position that includes mission-oriented research (75%) and outreach (25%) for the Agricultural Experiment Station located in Corozal, Puerto Rico. Doctoral degree and training in mycology and fieldwork. The appointee will establish an extramurally funded research program on tropical pathogens that develops novel approaches to disease management. The successful candidate will address fundamental questions using modern techniques to integrate a broad view of tropical pathosystems. Supervision and advising of graduate students, outreach, curricular development, and university service are expected. Applicants should submit a CV; statement of research, including research interests and background; official academic transcripts; and the names and full contact information of three references. Citizenship restrictions apply. Communication skills in Spanish and English are highly desirable. Inquiries should be directed to Lydia I. Rivera-Vargas, Search Committee chair, Department of Crops and Agro-Environmental Sciences, University of Puerto Rico, Mayaguez Campus by e-mail: lydiai.rivera@upr.edu. Open until filled, but to ensure consideration, applications should be received by July 15, 2013. Salary will be commensurate with academic qualifications and professional experience.

Important APS Dates to Remember

July 2013

1 Entries for 2013 Art in Phytopathology contest due
8 Regular registration closes for the 2013 APS-MSA Joint Meeting
15 Applications due for APS public policy fellowship
15 Public Policy Board early career internship applications due
31 OIP Silent Auction items due

State University: Bill Dawson, University of Florida; Marty Draper, USDA NIFA; Nik Grunwald, Oregon State University; Jan Leach, Colorado State University; Dan Maclean, Sainsbury Laboratory; Larry Madden, The Ohio State University (OSU); Sally Miller, OSU; Chris Munday, Oregon State University; Kiran Mysore, Samuel Roberts Noble Foundation; and David Stenn, Boyce Thompson Institute.

During facilitated discussions the group developed an impressive list of compelling and impactful new efforts in plant pathology, gaining a clearer picture of where the discipline is heading. An exercise using Wordles helped reveal, in a unique format, the current state of the science through the demonstration of the frequency of key words used in a wide variety of publications and meeting abstracts processed by APS. With this information, the group then began the process of identifying and categorizing the gaps and scientific questions that need to be addressed to expedite the progress of the science of plant pathology. Five critical targets for plant health were identified, with nearly 60 questions in total developed within those areas where research is most needed. Additionally, a list of gaps in technology was outlined. With this information in hand, APS will now reach out to the membership for additional input and prioritization. Plans are also in progress to share the information during the APS-MSA Joint Meeting in Austin, where members will be encouraged to submit a response with refinements and input. The goal, with involvement from the broadest aspects of the membership, will be to develop a comprehensive report along with an overall strategy and action plan. The opportunities for a report like this are exciting and will be an opportunity for the entire community to engage. Make sure to watch for more information in upcoming issues of Phytopathology News.
Phytopathology

July 2013, Volume 103, Number 7

## Calendar of Events

### APS Sponsored Events

<table>
<thead>
<tr>
<th>Month</th>
<th>Event</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 2013</td>
<td>2013 APS-MSA Joint Meeting</td>
<td>Austin, TX. <a href="http://www.apsnet.org/meet">www.apsnet.org/meet</a></td>
</tr>
<tr>
<td>October 2013</td>
<td>2013 APS Northeastern Division Meeting</td>
<td>Southbury, CT. <a href="http://www.apsnet.org/members/divisions/ne">www.apsnet.org/members/divisions/ne</a></td>
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<tr>
<td>March 2014</td>
<td>2014 APS Potomac Division Meeting</td>
<td>Annapolis, MD. <a href="http://www.apsnet.org/members/divisions/pot">www.apsnet.org/members/divisions/pot</a></td>
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<tr>
<td>June 2014</td>
<td>2014 North Central Division Meeting</td>
<td>Madison, WI. <a href="http://www.apsnet.org/members/divisions/nc">www.apsnet.org/members/divisions/nc</a></td>
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### Upcoming APS Annual Meetings

- August 9-13, 2014—Minneapolis, MN. *(Held jointly with the Canadian Phytopathological Society.)*
- August 8-12, 2015—Albuquerque, NM.

### Other Upcoming Events

#### July 2013


#### August 2013


#### September 2013


#### October 2013

- 20-25 46th Brazilian Phytopathological Meeting. Ouro Preto, Minas Gerais State, Brazil. www.cbfito46.com.br

#### December 2013

- 3-5 Fourth International Phytophthora Capsici Conference. Duck Key, FL. http://conferences.dce.ufl.edu/pcap/

#### July 2014