Dear alumni, staff, students, and faculty of PPWS:

I am excited to introduce this year’s departmental newsletter. As you may know, I have been appointed as interim department head of PPWS and started my position in October 2015. It is an honor to serve the department and I want to thank everyone for their support and help, in particular, the wonderful PPWS office staff. Without them, it would have been impossible to make this a smooth transition. I also deeply appreciate all the help from our former department head, Beth Grabau, who explained to me the ins and outs of the administrative duties of my position.

The department has accomplished a lot during the last year as you can see from the stories in this newsletter and the list of publications and awards. I would like to congratulate Jacob Barney and Guillaume Pilot for their promotions to associate professors and David Schmale for his promotion to professor.

Unfortunately, we also lost some good friends and colleagues. Bhadra Gunasekera passed away on February 15, and Betty Foy, wife of our former department head, Larry Foy, passed away on March 30.

As for our department as a whole, the significant news is that we have had intensive and productive discussions with our colleagues in the departments of Crop and Soil Environmental Sciences and Horticulture and the College of Agriculture and Life Sciences leadership, and we developed a pre-proposal for the School of Plant and Environmental Sciences. The pre-proposal was recently approved by the faculty of the three departments, Dean Alan Grant, and the Provost Thanassis Rikakis. The plan is to have the new School in place and to hire a School Director in 2017. Importantly, the plan is for PPWS to continue as a unit within the school. Therefore, you can expect to see the PPWS annual newsletter to continue into the future.

Sincerely,

Boris Vinatzer

CALS ALUMNI AWARDS

This year’s Alumni Award recipients Lawrence Datnoff and Angela Post were celebrated by PPWS at a special luncheon that was attended by most of our student and faculty and many of our emeritus professors as well. Both award recipients gave short presentations about their careers and provided insightful advice to our current students. Datnoff was Emeritus Professor George Lacy’s very first graduate student and it was emotional to see him introduce Datnoff’s seminar 35 years after Datnoff graduated with an M.S. degree from PPWS.

PPWS Awards

Jacob Barney - The Henderson Outstanding Faculty Award
Dan Tekiela - Arthur J. Webber Graduate Student of the Year Award
Cris Thompson - JoAnn Ridpath Staff Employee Award
Mizuho Nita - Allan H. Kates Extension Award
Jacob Barney and Dan Tekiela - Excellence in Scholarship Awards

Note: Please update your information at the Alumni Association website at www.alumni.vt.edu/gateway (select “View and Update Your Profile”).
Scientists Discover Way to Potentially Track and Stop Human and Agricultural Viruses

Viruses are molecular thieves that take from their hosts under the cloak of darkness. But now Xiaofeng Wang, PPWS assistant professor, has found a way to not only track viral hijackers, but also potentially stop them from replicating. The discovery has broad ranging applications in stopping viral outbreaks such as Hepatitis C in humans and a number of viruses in plants and animals because it applies to many viruses in the largest category of viral classes, positive-strand RNA viruses. The findings were recently published in the Proceedings of the National Academy of Sciences.

“Even though these viruses infect very different hosts, they all replicate similarly across the board, so what we learn from one virus can potentially be translated to control viruses in agricultural production as well as human health,” said Wang. Wang’s findings could target any number of plant viruses. One virus Wang has studied — the cucumber mosaic virus — affects pumpkin, squash and gourds in 1,200 species across 100 plant families. Potentially, sprays could be developed to halt the virus on plants, saving millions of dollars in agricultural sectors. Wang, who is also associated with the Fralin Life Science Institute, used brome mosaic virus to study how viral infections start. He found that the brome mosaic virus stimulates synthesis of host lipid cells called phosphatidylcholine at the sites where viral replication occurs, and that by inhibiting its synthesis, the viral replication stopped.

- Excerpt from a Virginia Tech News article by Amy Loeffler. The full version of the news release can be accessed here: http://www.vtnews.vt.edu/articles/2016/02/022416-cals-viralreplication.html

Charlie Cahoon - New Assistant Professor - Weed management in staple crops

In summer 2015, PPWS hired new Assistant Professor and Extension specialist Charlie Cahoon. Cahoon grew up on his family’s farm in Swan Quarter, North Carolina, immersed in row crops, vegetables, and hog farming. In 2011, he graduated from North Carolina State University with a degree in Agronomy. Under the direction of Alan York and David Jordan, his doctoral studies focused mainly on Palmer amaranth control in cotton. Additional projects included carryover potential of fluridone to various crops following application to cotton and fecundity of glyphosate–resistant –susceptible Palmer amaranth in the field. In March 2015, Cahoon completed his Ph.D. Stationed at the Eastern Shore Agriculture Research and Extension Center in Painter, Virginia, his mission is to foster Virginia agriculture by developing innovative and sustainable weed management solutions for vegetable and row-crop producers. At the forefront of his research are management of herbicide-resistant weeds and preemptive strategies for avoiding future herbicide resistance. He also hopes to promote proper stewardship of new technology as it reaches the field. Cahoon is excited to work with a variety of crops and to join the weed science team at Virginia Tech. In his spare time, he enjoys tinkering on his 1962 John Deere 1010 tractor, hunting, fishing, and traveling with his wife, Jenny, and dog, Sweet.
FACULTY AWARDS, SCHOLARSHIPS, AND RECOGNITIONS


David Langston – APS 2016 Excellence in Extension Award.


A SELECTION OF HIGH IMPACT FACULTY PUBLICATIONS


STUDENT AWARDS


Charlotte Oliver – Hugh Lane Scholarship, Fall 2015.


Unnati Sonawala – Bruce W. Perry Scholarship, Fall 2015. Travel Award, VT TPS, Fall 2015.


Winners of the fall 2015 PPWS Minisymposium poster competition Kasia Dinkeloo, Julien Besnard.

Theses and dissertations

Noah Adamo, M.S. – Fungicide resistance of Botrytis cinera from Virginia winegrapes, strawberries, and ornamental crops.

Yaya Diallo, M.S. – Control of anthracnose (caused by Colletotrichum gloeosporioides s.l.) on mango in Senegal by fungicides and biofungicides.

Morgan Franke, M.S. – Understanding Invasive Species Impacts on Reclaimed Surface-Mined Lands.

Taylor Jones, Ph.D. – Grapevine viruses and associated vectors in Virginia: survey, vector management, and development of efficient grapevine virus testing methods.

David McCall, Ph.D. – Expanding the application of spectral reflectance measurement in turfgrass systems.

Charlotte Oliver, M.S. – Investigation of wine grape cultivar and cluster development stage susceptibility to grape ripe rot caused by two fungal complexes, Colletotrichum gloeosporioides, and C. acutatum, and evaluation of potential controls.

Aman Rana, Ph.D. – Optimizing the Use of Microwave Radiations for Weed Management.

Andrew Schneider, Ph.D. – Investigating the Role of the VAL1 Transcription Factor in Arabidopsis thaliana Embryo Development.

Daniel Tekiela, Ph.D. – Toward a more integrated approach to quantifying the ecological impacts of invasive plants.

Katelyn Venner, Ph.D. – Evaluating methiozolin programs for golf putting greens and investigating potential modes of action.
Lawrence Datnoff
PPWS 2016 Alumni awardee (over 10 years)

Datnoff received his B.S. (Horticulture and Plant Pathology) from the University of Georgia in 1976, his M.S. (Plant Pathology) from Virginia Tech in 1981, and his Ph.D. (Plant Pathology) from the University of Illinois in 1985. In 1986, Datnoff worked as a research affiliate with USDA-ARS, Ft. Detrick, Maryland, and part of his research was conducted with CIMMYT in Mexico. In 1988, he joined the University of Florida’s Plant Pathology Department as a research/extension faculty member at the Everglades Research and Education Center, focusing his efforts on plant disease management and the control of fungal plant pathogens. In 2003, Datnoff moved to Gainesville where he served as professor in the Plant Pathology Department, teaching Fundamentals of Plant Pathology/General Plant Pathology. During his time in Florida, Datnoff pioneered early research efforts that highlighted the role of silicon in plant health, disease suppression, enhancement of host plant resistance, and the understanding of this resistance at both the physiological and molecular level. He served as Leader of a multi-disciplinary team that earned (in 1999) the UF/IFAS Interdisciplinary Team Research Award for the Silicon Project.

Also in 1999, Datnoff conceived and organized the First International Conference on Silicon in Agriculture, attended by 21 participant nations. Other distinctions include earning a National Council for International Scientific Exchange-International Agricultural Research Centers Pilot Linkage Program Research Fellowship, (CIAT, Colombia, 1993), Fulbright Research Award (Spain, 1996–1997), UF Research Foundation Professorship Award (2006), UF-IFAS International Fellow Award (2006), UF International Educator of the Year, College of Agricultural and Life Sciences Award (2006), Invited Visiting Professorships in 2006 (Institute of Bioresources, Okayama University, Japan) and 2008 (Departamento de Agronomia, Universidade Federal de Uberlandia, Brazil), American Phytopathological Society Caribbean Division’s Frederick L. Wellman Award (2012) and the American Phytopathological Society’s International Service Award (2012).

Datnoff has been invited to give seminars and keynote presentations at universities, institutions and international meetings in 20 countries. In 2008, Datnoff accepted the position of professor and head of the Department of Plant Pathology and Crop Physiology at Louisiana State University.

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The annual PPWS Agricultural Research and Extension Center and Ag-Industry Tour was held in August 2015. Eighteen students and three faculty members braved the summer heat and humidity synonymous with agriculture across eastern Virginia by visiting three experiment stations and seven agribusinesses. The first day included behind-the-scenes tours around Colonial Williamsburg by Virginia Tech alumni Rick and Laura Viancor and Jeremy Waddell, which featured stops at various ornamental and vegetable gardens, plus the adjacent Golden Horseshoe golf course. The group was treated to a colonial-style lunch at Shield’s Tavern and had an opportunity to explore the historical grounds to close out the day.

Steve Rideout, Eastern Shore AREC (ESAREC) Director and tour coordinator, led tour stops representing the eastern shore’s agriculture on the second day. The first stop was a tour of the Copper Cricket Farm, a community-supported agriculture business, where two acres of intensely managed vegetable production serves approximately 100 members. A tour of Tankard Nurseries provided the opportunity to see large-scale ornamental production that serves a large portion of the eastern seaboard. Attendees were able to see tomato packaging in action at the Pacific Tomato Growers Packing Shed before a lunch-and-learn session at the Eastern Shore AREC, where Rideout shared a historical perspective of eastern shore agricultural research. Charlie Cahoon continued the ESAREC visit with field stops around the farm to discuss his research with weed biology and management. The group closed out the day with a stop at Chatham Vineyard before dinner and casual networking at The Shanty seafood restaurant.

The final day of the tour included stops at the Hampton Roads and Tidewater ARECs, and a guided tour of the Suffolk Cotton Gin. Jeff Derr showed the group some of his applied research on turf and ornamental weed management at the Hampton Roads AREC (HRAREC) before the group was shuttled to the Tidewater station. David Langston, Tidewater AREC (TAREC) director, led another lunch-and-learn session where he provided the graduate students some advice on early career development and an understanding of how the faculty at experiment stations serve local peanut, cotton, soybean, and small grain growers. After lunch, Hillary Mehl led a farm tour to show the group her current research with fumigicide resistance and disease management of sorghum. The Suffolk Cotton Gin was the group’s final stop before returning to campus on the final evening. Kudos to all of the growers and AREC personnel for volunteering their time and expertise to make the 2015 AREC and Ag-Industry Tour a success.

PPWS Faculty Attend PVQE Meeting

As the leader of the Peanut Variety Quality Evaluation Program and multi-state peanut Hatch project, Maria Balota conducts and coordinates the evaluation of candidate peanut cultivars and reference lines from programs in Virginia and the Carolinas. Each March, participating PVQE program members and the advisory committee meet to review data from the previous season and make recommendations for new releases. In addition to Balota, Virginia Tech attendees at the March 30 meeting in Suffolk, Virginia, were PPWS Department Head Boris Vinatzer, who chaired the meeting, PVQE advisory committee member Elizabeth Grabau, Senior Research Associate Soyon Park and Tidewater AREC faculty members Hillary Mehl and Director David Langston. Balota and co-investigators from North Carolina State University and Clemson University collect agronomic, grade and quality data at multiple locations for all entered peanut cultivars to generate an annual two volume report available at the Virginia Cooperative Extension website as Information Series Publications Nos. 508 (https://pubs.ext.vt.edu/AREC/AREC-164/AREC-164-PDF.pdf) and 509 (http://www.pubs.ext.vt.edu/AREC/AREC-172/AREC-172-PDF.pdf).

Submitted by Elizabeth Grabau
Angela Rose Post  
PPWS 2016 Alumni awardee (less than 10 years)

**Angela Rose Post** grew up in Franklinville, North Carolina. She received a B.S. in Botany and a B.A. in Multidisciplinary Studies from North Carolina State University in 2003 and 2004, respectively. She obtained another B.S. at NCSU from the Department of Biological Sciences in 2005. All three degrees were awarded cum laude. She continued her studies at NCSU and obtained an M.S. in Weed Science from the Department of Horticulture in 2008. Post then moved to Virginia Tech for her Ph.D. studies with **Shawn Askew** in PPWS, investigating the control of the silvery threadmoss. After obtaining her Ph.D. in 2013, Post started her own research and extension program as Assistant Professor and Extension Weed Specialist at the Department of Plant and Soil Sciences, Oklahoma State University.

At Oklahoma State she worked diligently to build a team of 12 scientists to work on winter canola, a new crop in Oklahoma. This team has brought hundreds of thousands of dollars to the region in the form of federal grants and assisted growers in learning how to manage this challenging winter broadleaf crop. Post has recently moved and is currently an assistant professor of small grains cropping systems at NCSU. Although Post is still a junior assistant professor, she has accumulated a very impressive number of awards, peer-reviewed publication, extension publication, and presentations, including invited talks, at both national and international meetings.

Besides her impressive accomplishments in research and extension, she has continued teaching and advising and has taught “Principles of Weed Science” and “Advanced Herbicide Metabolism” at Oklahoma State University and is currently advising two Ph.D. students and five M.S. students.

**McCall Hosts Golf Course and Agronomy Representatives from Argentina**

**David McCall** hosted a group of golf course superintendents and agronomists from Argentina in May, 2016. The highly engaged group toured golf courses and sports turf facilities around Richmond, Virginia, to learn about new innovations and agronomic practices that can be implemented at their home facilities.

Great dialog was exchanged about integrated management strategies that enhance the environmental profile around golf courses while also reducing operating budgets. Particular emphasis was placed on current research by the Virginia Tech Turfgrass Pathology lab to alleviate spring dead spot of Bermuda grass, as this is the most common disease impacting Argentine golf course fairways. **Jordan Booth**, golf course superintendent at Willow Oaks Country Club and current PPWS graduate student, was on hand to discuss his thesis research project that utilizes unmanned aerial vehicles — or drones — for mapping spring dead spot to further characterize edaphic variables associated with epidemics. Future collaborative research efforts will focus on the translation of spring dead spot suppression practices used in Virginia to the Buenos Aires province of Argentina.

**PPWS students participate in Big Event**

PPWS students take a break from labs and lectures to give back to the community by participating in Virginia Tech’s annual Big Event. Rebecca Fletcher, John Herlihy, Ranjeet Randhawa, Shelton Boyd, Kasia Dinkeloo, Kevin Fedkenheuer, Mike Fedkenheuer (left to right). Not pictured: Wei Wang.
Stay connected with PPWS

We are updating our alumni contact list as we consider future paperless newsletter distribution, which would go directly to your email inbox and improve communication between PPWS and alumni. Please take a moment to complete the survey below or online at: http://tinyurl.com/q2cka75

What is your last name? __________________________________________ What is your first name? ______________________________________

Mailing address  __________________________________________________________________________________________________________

City_________________________________________State/Province__________________Zip Code_______________________Country_______________________

VT PPWS Degree   ❑ M.S.   ❑ Ph.D.   ❑ Did not graduate from Virginia Tech   Year graduated____________________

Employer and employer city address   __________________________________________________________________________________________

Job title________________________________________ What is your email address? ____________________________________________

May we add you to our alumni email list?   ❑ Yes   ❑ No   ____________________________________________________________________________

Which of the following accounts do you have? (Check all that apply)   ❑ Facebook   ❑ Twitter   ❑ LinkedIn   ❑ Instagram   other:____________________________________

How would you like to receive future newsletters and announcements?   ❑ Mail   ❑ Email/electronically   ❑ Both   ❑ Do not wish to receive future announcements

If located in Virginia, would you or your company be interested in providing an informative tour of your facility to our students as part of the annual agriculture industry tour held in August?   ❑ Yes   ❑ No   ❑ Maybe

Would you be interested in being a professional mentor or networking contact for current PPWS students and recent graduates?   ❑ Yes   ❑ No

If you are an alumnus, would you be willing to be a “featured alumnus” on our alumni web page? (currently under development)   ❑ Yes   ❑ No

Please tell us more about yourself in regard to your personal and professional life. Recent promotion? Marriage or new family member? Celebrating retirement? etc.______________________________________________________________________

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