

Department of Horticulture

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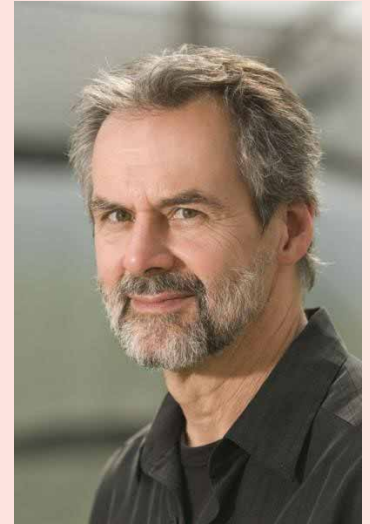


Dr. Richard Veilleux, Department Head

March-April 2018

Last week's foot of snow in the New River Valley wreaked havoc on spring bloom this year – fresh daffodil blooms faced down in the mud, tree branches were broken under the weight of heavy snow and star magnolias resembled wet Kleenex. But everybody got a snow day and campus was decorated briefly with snow sculptures.

We are getting closer to forming the School of Plant and Environmental Science. Mike Evans, our new director, will be moving to Blacksburg in mid-April to prepare for the merger, which is slated for July 1. A few decisions have been made: the main SPES office will be located on the third floor of Smyth; a couple of new support positions will be announced and hired to facilitate the operation of a unit much larger than most departments; two new SPES tenure-track positions will be advertised soon, one centered on breeding horticulture crops and another on ecological restoration. The search committees, comprised of faculty from all three departments, are putting the finishing touches on the job descriptions and hope to attract a deep pool of candidates. Meanwhile the departments continue to function as separate units. We in horticulture are working to ensure the continuity of our educational programs and look forward to the opportunities that SPES will provide to enhance them.



– Richard



Congratulations to Tiffany and Alex!

Their son, Clay Thompson Hessler, was born the evening of February 15th. Both mom and baby are doing great!



Senior Research Specialist, Velva Groover, and Office Manager, Tabitha Hartman, are flanked by Dean Alan Grant, RV and President Tim Sands at an awards ceremony on March 28 in the President's Suite at Lane Stadium. Velva was selected for consideration in the Governor's Award Program and Tabitha was a President's Award recipient.



Undergraduate News- NALP Edition!

The National Collegiate Landscape Competition (NCLC) was held at Alamance Community College in Graham, NC this March. The Virginia Tech team consisted of 23 students, with majors in Horticulture, Agricultural Technology, Agribusiness, Mathematics and Landscape Architecture. The team traveled with three advisors from Horticulture, Barbara Leshyn, Scott Douglas and John James, as well as Tom Martin from Agricultural Technology.

Virginia Tech placed 10th overall of 64 colleges and universities. Our students competed against 700 students from all over the United States and Canada. Our individual placements are as follows...

- Kevin Osborne MATH - #2 Construction Cost Estimating
- Joe Mills LCON - #3 Maintenance Cost Estimating, #4 Sales Presentation, #7 Super Star
- Jonathan Cerritelli AAEC - #3 Small Engine Repair
- Tess Reeves #5 LAR - 3D Exterior Landscape Design.
- Cheyenne Salmon EHRT - #6 Flower and Foliage ID
- Wil Lannon AT - #6 Mini Track Loader Operations
- Zac Carter AT- #10 Skid Steer

Joe Mills (LCON), Will Shelburne (LCON) and Austin Jennings (AT) were recipients of scholarships

at the student awards banquet. The students also attended the career fair meeting with industry folks to discuss career and internship opportunities. Two of our students accepted internships before the competition was over.

The Virginia Tech team won the Spirit Competition at the opening ceremonies and brought home a very big, \$1000.00 check!

Many of our students would not be able to attend without donations from our industry folks. We thank our sponsors this year: Heritage Landscape, Kane Landscape Services, James River Nurseries, VNLA, Ruppert Landscape, Hidden Lane Residential Landscapes, Southern Landscape Group, Williams Brothers Tree and Lawn Service, RSG Landscaping and Lawn Care, Mickey Hayes, Tom Martin, Department of Horticulture, Agricultural Technology Program, and The Horticulture Club at Virginia Tech.

Next year's competition will be held at Colorado State in Fort Collins. We look forward to next year's event as seasoned NCLC students will attend and are already studying and strategizing.

This is a wonderful opportunity for our students to appreciate the breadth of the industry and represent VT Horticulture.





We welcome Tetyana Early, our new Fiscal Technician

Tetyana has lived in this area for over 15 years and was first introduced to the Horticulture Department when her neighbor took her to an event at the Hahn Horticulture Garden. During her employment at the VT Inn, she got to enjoy Barbara Leshyn’s beautiful flower arrangements and is proud that the Department won 2nd place in the Fashion for Evergreens contest this past holiday season.

Tetyana developed a love of horticulture as a child visiting her grandparents vegetable and fruit gardens and currently has her own garden. Her favorite plants are black and red currants, and strawberries. She also appreciates rose’s many different colors and scents. As a local foods supporter, she enjoys visiting farmer’s markets and health stores. She is inspired by all of the Department’s projects and hopes to be a part of many more of them in the future.

A special thank you!

The department thanks Price Davis AIFD CFD, for his support of the VT Floral Design Program. Price graduated from Horticulture in 1971 and established a successful career as a retail florist in Winston Salem, NC. After 47 years in the industry, Price plans to sell Price Davis Florist and retire. Mr. Davis generously donated over 225 books as well as rare copies of magazines highlighting renowned floral artists from the world over to the VT Floral Design Program. Many books and magazines in the collection, valued at over \$14,000, have been signed by the author or artist. ‘Floral Hokies’ for generations to come will benefit from Price’s generosity.



New Produce Safety Website

Foodborne illness outbreaks in the United States and abroad continue to make the news. Regardless of whether it is fresh vegetables, fruits, nuts, animal products, or packaged food, the ongoing incidence of contaminated food has resulted in a demand for food safety assurance and increasing regulation. While there is no way to completely eliminate all of the potential risks of microbial contamination, there are many food safety practices that growers, food handlers, and consumers can implement to reduce risks. We are excited to share the newly launched comprehensive Virginia Produce Safety website, <http://www.hort.vt.edu/producesafety/>, which provides lots of information about the Fresh Produce Food Safety Team, as well as timely and science-based resources geared to reduce fresh produce contamination risks, beginning at the farm level, progressing through the marketplace to the final end-user, the consumer. This website has been in the making for over four years, featuring the primary



efforts of Amber Vallotton and Sarah Gugercin, along with contributions from Joyce Latimer, Renee Boyer, Melissa Chase, and Laura Strawn, amongst others. In addition to the wealth of content on the website pages, the site also includes the Virginia Fresh Produce Safety Blog, which features regular news stories, as well as information related to upcoming events and opportunities.

Regional Hops Conference Hosted by Virginia Tech

More than 230 registrants, speakers, and vendors, representing 18 states from Texas to Minnesota, enjoyed the 3rd Annual South Atlantic Hops Conference (SAHC) at the Virginia Tech Inn and Skelton Conference Center over March 2 & 3, 2018. This year's conference featured two full days of educational sessions, research reports and posters, networking opportunities, and a trade show. Attendees included hop growers, researchers, Extension educators, brewers, and allied industries. An additional Research Hop Yard Open House was hosted at the Urban Horticulture Center on March 1st.

Fifteen speakers were featured in educational sessions that included beginning and experienced grower tracks, keynotes, in-depth tracks on six topics ranging from hops quality and food safety to pest, pathogen and weed management. Off-site options including a tour of Rising Silo Brewery/Glade Road Growing, and a Brewing Science Essentials track hosted by Food Science & Technology at the HABB1 Pilot Plant. Post-conference, attendees were surveyed to assess satisfaction with conference logistics and sessions, as well as impacts on future hop-growing strategies and cultural practices.

Holly Scoggins, Associate Professor, organized and led the event on behalf of Virginia Cooperative Extension (VCE) and the Department of Horticulture. Assistance in the planning and execution of the SAHC was provided by HORT colleagues Daniel Jackson, Barslund Judd, John Freeborn, Devon Johnson, and Dave Close. Laura Siegle, VCE Agent, Amelia County, was also critical to the success of the conference. The SAHC was formalized in 2016 with the first conference in Richmond VA; the 2nd was held in Asheville NC in 2017. Both were led by Dr. Jeanine Davis of NCSU.

A huge "Thank You" to the sponsors, vendors, speakers, and partner institutions and associations (N.C. State University, VCE, Virginia State University, and the Old Dominion Hops Cooperative) for their efforts in support of our regional conference.



Ken Hurley, Food Science & Technology, presents Hop Chemistry to the Beginning Grower's track at the South Atlantic Hops Conference. Photo taken by Olivia Coleman, University Advancement (VT).



The VT Research Hop Yard Open House was well-attended despite challenging weather. Daniel Jackson (center), floriculture and hops research manager, led several groups through the yard, located at the Urban Horticulture Center.



Brewer and Grower Panel Discussion included (left to right) Bill Scruggs of VDACS, Greg Zielske of Rising Silo Brewery, Andrew Cox of Greenmont Hopworks, Jason Porter of Starr Hill Brewery, John Bryce of Sinkland Farms Brewery, and Mike Pensinger of Parkway Brewing Company.



Attendees networked with trade show vendors and exhibitors on Friday March 2. All 3 photos by L. Siegle.

Link to trade show video <https://www.facebook.com/HopsVT/>



Extension News

Megan O'Rourke attended a working trip Jan 28-Feb 14 with the IPM Innovation Lab team from Virginia Tech to Nepal, Bangladesh, and Cambodia. The purpose of the trip was to coordinate ongoing research projects to reduce pesticide use for vegetable production in these countries.

Jayesh Samtani presented the findings of his OMALS student Mikel Conway's project titled 'Supplementary Foliar Nutrients on Primocane bearing Blackberry Varieties' at the 10th Annual Berry Production and Marketing Conference in Petersburg, VA on March 8, 2018. The meeting was attended by over 150 growers.

Jayesh Samtani was invited to present at a Strawberry Production Meeting titled 'From Buds to Blooms and Berries' at Rockingham County Extension Office, Reidsville, NC on March 7, 2018. The meeting was attended by ~20 growers.

Jayesh presented his work on soil disinfestation strategies, and discussed strawberry cultivars, plant tissue sampling, and importance of field and crop sanitation at the Mid-Atlantic Field Day, Strawberry School and Trade Show held in Virginia Beach, VA on Feb. 26 and 27, 2018.

Jayesh along with Sherif Sherif, Chris Bergh, Keith Yoder, Chuck Johnson, and Doug Pfeiffer organized and participated in a Fruit Production Workshop at the Virginia Cooperative Extension Conference on Feb. 7, 2018 on campus.

Grants

Megan O'Rourke is co-PI with Margaret Couvillon in the Department of Entomology on a new \$614,067 pollinator conservation project funded by the Foundation for Food and Agriculture Research's Pollinator Health Fund. The project is aimed at increasing honey bee and native bee health. The project was featured in the VT News: <https://vtnews.vt.edu/articles/2018/03/cals-pollinatorgrant.html>

Publications

Laimbeer FPE, Makris M, Veilleux RE (2018) Measuring endoreduplication by flow cytometry of isolated tuber protoplasts. *JoVE*: e57134. [Link to article](#).

HORT PhD candidate, Parker Laimbeer, worked with Vet Med Flow Cytometry supervisor, Melissa Makris, and advisor, RV, to publish this video in the *Journal of Visualized Experiments (JoVE)* on a new method to estimate the DNA content of starch cells in potato tubers. These large cells contain many times the DNA content of most cells found throughout the rest of the plant. Their large size, abundance of starch granules and high DNA content required new methodology, as previously described protocols for measuring DNA content were unsuccessful.

Rodrigues, R.R., Rodgers, N.C., Wu, X. and Williams, M.A., 2018. COREMIC: a web-tool to search for a niche associated CORE MICrobiome. *PeerJ*, 6, p.e4395. [Link to article](#).

Richard Rodrigues, a former Ph.D. student in Mark William's laboratory, worked to develop a bioinformatics tool to identify habitat specific microbes across diverse sites using 31 switchgrass community habitats as a case study. This work was part of his dissertation.

Wan G, Frazier T, Jorgensen J, Zhao B, Frazier CE (2018) Rheology of transgenic switchgrass reveals practical aspects of biomass processing. *Biotechnology for Biofuels* 11: 57

Hort former graduate student, Taylor Frazier, whose dissertation research was advised by Bingyu Zhao before she moved to a postdoctoral position at the University of Tennessee, worked with Guigui Wang in the Department of Sustainable Biomaterials at Virginia Tech to develop a method to measure the mechanical properties of switchgrass to determine how it had been affected by the expression of a transgene expected to lower cell wall lignin composition for ease of biomass fermentation.



Scott Lowman (far right), who holds an adjunct appointment in Horticulture and works at the Institute for Advanced Learning and Research in Danville, VA, was featured in the Roanoke Times alongside Senator Mark Warner on a visit to Ferrum College for a demonstration on the agricultural use of drones (one of which is also featured).

[Link to story.](#)

Hahn Horticulture Garden News

Sign Crowdfunding!

Help the Garden raise funds to design, manufacture, and install a collection of six interpretive sign panels throughout the garden. We teamed up with VT's crowdfunding platform JUMP and the campaign started on March 27th, 2018. Visit <https://crowdfund.vt.edu/project/9056> to learn more and to support this project!



Chris McCullough, set up woody plants lab quiz on March 12. Classes were cancelled for a snow day. What to do with all those plants? Make a quiz plant frosty, of course!



The Best Garden Party Around!

This year's Gala will be on **June 9th, 2018** at the Hahn Horticulture Garden from **5:30 -9:30 pm**. This year's theme – inspired by Pantone's 2018 color of the year – is Ultra Violet. People can visit www.hort.vt.edu/hhg/gala to register or for more information. Contact Lisa at llipsey@vt.edu with questions.

Upcoming Events at the Hahn:

Workshop

Thursday, April 12, 6:30 - 7:30 pm

Gardening in the South with Mark Weathington.
\$10 general public, \$5 HHG Friends.

Learn at Lunch (FREE) Wednesdays noon to 1 pm

- **April 4** *Spring Bulbs* with Holly Scoggins
- **April 18** *Plant Sale Preview!!!*

Visit <http://www.hort.vt.edu/hhg/events.html> to learn more about upcoming events!

Art in the Garden

- **March 1 to April 30th:** Cyanotypes by Jan Downs in the Hahn Pavilion.

The 2018 Simply Elemental Outdoor Art Exhibition is currently accepting artist applications. Application deadline **April 2, 2018**. More information at <http://tiny.cc/18elemental>



PLANT SALE

We have

INDOOR PLANTS!!!

PRESENTED BY: THE HORTICULTURE CLUB
AT VIRGINIA TECH

APRIL 19-20: 8am-6pm

APRIL 21: 8am-3pm

Virginia Tech Campus Greenhouses
101 Garden Lane, Washington St SW

