

Department of Horticulture

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Dr. Richard Veilleux, Department Head

July 2018

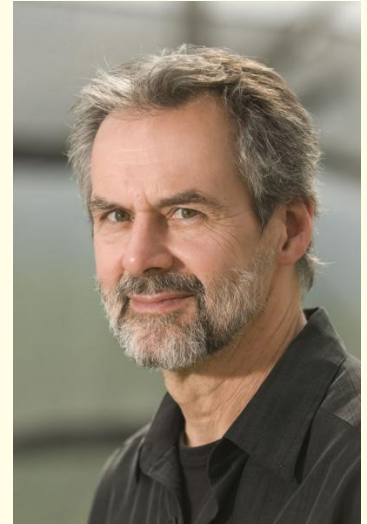
Now that a well-attended and highly enjoyable Garden Gala has become a memory and preparations are going full speed ahead for the launch of the School of Plant and Environmental Sciences (SPES), this will indeed be Sarah's and my last Horticulture Newsletter. The administrative structure of SPES will include an Executive Committee of seven, composed of a representative of each of the three former departments. For the first year, at least, Holly Scoggins will be our representative from Hort. The committee will also include the yet-to-be-named Associate Program Directors for: 1) Undergraduate Education, 2) Research and Graduate Education and 3) Extension and Outreach. Finally, an AREC representative. Representatives from Hort will be also be included on all of the other committees that will serve SPES, e.g., Graduate Committee, Undergraduate Committee, Extension Committee, Scholarship Committee, Facilities Committee, Awards Committee, Alumni Committee, and International Committee. Horticulture will be appropriately influential within SPES and our programs will continue.

We are sorry to lose some of our valued staff as we move into SPES. Pris Sears, our Information Technologist for the last 13 years, who has solved our countless computer problems, will be leaving to join the CALS-IT team on July 1. Tabitha Hartman, our award-winning administrative assistant, who helped to keep us afloat over the last two tumultuous years, has taken a new job as office manager in the Department of Computer Science. Sarah Gugercin,

who has been working on our website, on-line courses and newsletters since 2007, will be joining the Dept. of Forest Resources and Environmental Conservation. And Roger Harris, former department head and faculty member since 1993, will retire on July 1. Roger's dedication to serving the department and university, his warm personality and easy accessibility will be sorely missed. He has many hikes planned for his immediate future and we wish him happy trails.

After almost 38 years as a faculty member, and occasional Department Head in the Department of Horticulture at VT, I will be retiring on August 1. Since my last student, Parker Laimbeer, defended his dissertation spectacularly, he has been rewarded with the honor of helping me clean out the lab in Latham to make room for a new hire in Genetics and Genomics of Horticultural Crops. Maybe no future esoteric titles on potatoes but esoteric titles on some horticultural crop are sure to be coming which warms my heart. I have really enjoyed the career that I was allowed to develop at VT, the students I have worked with, the dedicated staff, my colleagues at VT, other US institutions and abroad. Thanks for the opportunity to serve.

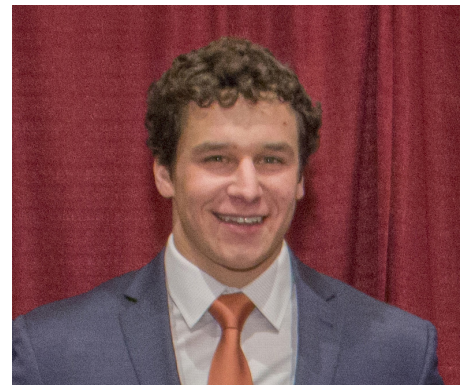
– Richard



Graduate Student News

Parker Laimbeer, a graduate student in the Veilleux lab, successfully defended his dissertation, “Potato genomics three ways: quantification of endoreduplication in tubers, a romp through the transposon terrain, and elucidation of flower color regulation” on June 18. Parker, a native of Rappahannock, Virginia, has been a member of the Translational Plant Science Graduate Program, since he was graduated from Elon University. His dissertation builds on the publication of the potato genome in 2011 and employs the unique potato germplasm that has been used to deduce genomic secrets that were hitherto impossibly guarded due to the complexities of the breeding structure of most varieties of this genetically complex crop.

Jake Shreckhise, co-advised by Drs. Jim Owen and Alex Niemiera, successfully defended his dissertation, “Phosphorus requirement and chemical fate in containerized nursery crop production” on May 9. Jake, a native of Grottoes, Virginia, pursued his Ph.D. after earning a B.S. in Environmental Horticulture from Virginia Tech in 2013. His dissertation provides critical new insights into the intricate relationship between phosphorus fertilizer and lime and micronutrient amendments that are routinely added to pine bark growing-media. His research also demonstrated that phosphorus fertilization of some popular ornamental nursery crops can be reduced by 50% to 90% compared to current best management practice recommendations.



Travels

Assistant Professor, Megan O’Rourke, traveled to Kenya June 9-22 as part of the CALS global scholars program to help launch a partnership with Egerton University and to develop research collaborations to improve pest management in horticultural crops.

Alex Hessler attended the two-day Instructors of Organic Agriculture workshop at Iowa State University in July. Instructors from seventeen universities convened to review an organic agriculture teaching framework developed with funding from the USDA Organic Research and Extension Initiative.



Honors

Congratulations to Richard Veilleux for receiving the Graduate School's outstanding mentor award. He has mentored 41 graduate students over his career. His nominator, Parker Laimbeer, along with several former students, recognized his building of community with weekly lab meetings, group activities, and journal clubs. They also credit him for modeling collegiality, balance, perseverance, and the ability to accept constructive criticism and to learn.

VT News story here: [tiny.cc/richardaward](https://www.vt.edu/newsroom/stories/2018/07/18/graduate-school-outstanding-mentor-award)

Publications

Thomas Blankers, Kevin P. Oh, Aureliano Bombarely and Kerry L. Shaw. 2018. The Genomic Architecture of a Rapid Island Radiation: Recombination Rate Variation, Chromosome Structure, and Genome Assembly of the Hawaiian Cricket *Laupala*. GENETICS Early online June 6, 2018; <https://doi.org/10.1534/genetics.118.300894>.

Aureliano Bombarely. 2018. Roses for Darwin. Nature Plants. Published: 15 June 2018. <https://www.nature.com/articles/s41477-018-0195-9>

In this article, Aure discusses the history of rose domestication and the possibility that mobile genetic elements could influence the expression of specific traits, such as scent, color and double flowering, that we value in this ancient ornamental crop. The recent publication of draft genomes of rose will allow us to solve some of the riddles of what makes a rose a rose.

Manrique-Carpintero, Norma C. Joseph J. Coombs, Gina M. Pham, F. Parker E. Laimbeer, Guilherme T. Braz, Jiming Jiang, Richard E. Veilleux, C Robin Buell and David S. Douches. 2018. Genome reduction in tetraploid potato reveals genetic load, haplotype variation, and loci associated with agronomic traits. *Frontiers in Plant Science* doi: 10.3389/fpls.2018.00944

Norma is a former doctoral student from our department who completed her dissertation under Richard Veilleux and is currently a research assistant professor at Michigan State. This paper describes the variation of a population of potato plants obtained from the variety, Superior, but with only half the chromosome number of Superior. The work was completed as part of an NSF Plant Genome project awarded to PIs in Michigan, Wisconsin and VT.





Roger and Richard discuss their retirement plans

Roger Harris retires this summer after almost 25 years in the Horticulture Department- 9 of which he served as Department Head. He plans to keep busy by embarking on another long hike (Pacific Crest Trail), sailing, and gardening.

Richard Veilleux retires this summer after 37 years in the department and served as Department Head this past year and in 2014 while Roger was hiking the Appalachian Trail. Richard will be spending more time at his cottage in New Hampshire but plans to continue living in Blacksburg watching herds of deer munch though his attempted garden.



Hahn Horticulture Garden News

The Hahn Horticulture Garden held its 14th annual Garden Gala on Saturday June 9th. Over 260 registrants enjoyed creative food, cold beverages, and live music by Vinyl Tap. The live and silent auctions featured over 80 items, one of our largest offerings ever. The Gala is the Garden's largest yearly fundraising event; please consider attending the 15th annual Gala in June 2019.

Check out more gala photos here: tiny.cc/2018gala

A special thanks to Holly Cromer for taking the photos!

Upcoming Events

- Tuesday, June 26, 6:30 - 8:30 pm Private tour of Stonewood Garden \$20 general public/\$10 Friends of the Garden members
- Thursday, July 12, 6:30 - 08:30 pm Private tour of The Kark Home and Garden \$20 general public/\$10 Friends of the Garden members
- Art in the Garden June 25 to August 31st: Paintings with Ruth Lefko



The Garden Gala brought together four heads, current and former, of the Hort department.