

# Department of Horticulture

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*Dr. Richard Veilleux, Department Head*

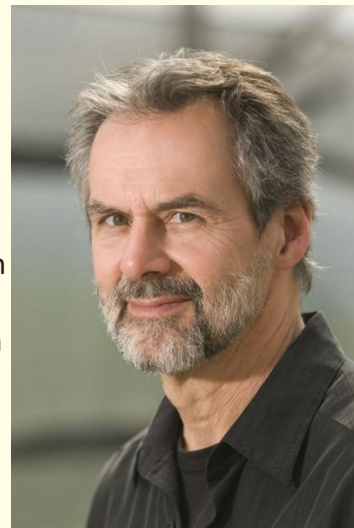
## September 2017

The last few months have been a tumultuous time for the department. We thought we would be reconfigured into the School of Plant and Environmental Sciences as of August 1 but, alas, our search for a director of the new school was unsuccessful and we are starting over with a new search. Meanwhile, Roger Harris stepped down as department head and I am filling that role until a director will be hired. We welcomed six new graduate students and 17 new undergraduates into the department this fall. We are offering several on-line courses over the next academic year, including Greenhouse Management, Viticulture, Advanced Studies in Urban Forestry Ecosystems, Plant Nutrition, Advanced Vegetable Crops, and Advanced Vegetable Seeds. Participation in the on-line program keeps growing and we currently have 16 students enrolled in OMALS (On-line Masters in Agriculture and Life Sciences). Many of our faculty traveled the world over the summer, Greg Welbaum and Bingyu Zhao to China, Joyce Latimer to Alaska, Aure Bombarely to Italy and Spain, Megan O'Rourke to Cambodia and Sarah Gugercin to Germany, to attend horticulture meetings as well as enjoy a change of scene.

Roger and I shared responsibility for the Hahn Horticultural Garden after Robert McDuffie retired in January. Fortunately, the garden staff, Stephanie Huckestein, Lisa Lipsey and Paul Chumbley, have many years of experience, so they competently held down the fort until the new director arrived. The garden actually thrived over the spring and summer, and remains a showpiece. They guided the interns and volunteers to plant and maintain all of the beds, masterminded the Garden Gala and facilitated the Art in the Garden Program, Simply Elemental. The new director, Scott Douglas (see profile), officially started on August 1, although many of you may have already met him during his visit at the Garden Gala.

We are looking forward to the academic year ahead, Blacksburg has doubled its population this past week, traffic is wretched, classes have already started, and we hope to see the alumni back in town for upcoming events.

*– Richard*



## Welcome New Graduate Students!

Laura Kaderabek (Ph.D.) – Jim Owen/Alex Niemiera

Merve Kiremet (Ph.D.) – Greg Welbaum

Subrato Kuri (Ph.D.) – Ramon Arancibia

Qi Li (Ph.D.) – Bingyu Zhao

Ashley Sibley (M.S.) – Mark Williams

Haidong Yan (Ph.D.) – Aure Bombarely

## Welcome to the Department!



**Scott Douglas, Hahn Horticulture Garden Director and Instructor:** Scott and his wife moved to Christiansburg this past July. Before that, they had lived in Bloomington, IL for seven years. He spent the 2016-17 school year commuting to Ames, Iowa where he taught in the landscape architecture department at Iowa State University during the week. He was interested in coming to the Horticulture department because it combined his two favorite jobs: design/project management and teaching. He also likes that this location is closer to his family (and the mountains). Of course, his favorite thing about the department is the Hahn Horticulture Garden. Scott was able to narrow down his favorite plants to two – the Ginkgo tree and purple coneflower. In his spare time, he enjoys working on cars, attending races, gardening, cycling, hiking and golf.

### Brianna Wills, HHG Event Assistant:

We are excited to welcome Bri Wills to the Hahn Garden staff as our new part-time Event Assistant. Bri grew up in the New River Valley and has a B.S. in Sustainable Development from Appalachian State University. Bri is happy to be back in Blacksburg working at the Hahn Garden. You'll also find her working at Stonecrop Farm and in her free time Bri enjoys putting in her garden at home, climbing, and taking her dog mountain biking.



### Daniel Jackson, Manager of Specialty Crops Research

Daniel and his wife moved to Blacksburg this past May. Before that, he was in Athens, GA working as an analytical chemist focusing on quality and flavor compounds in specialty crops, including Vidalia onions and olives. He was interested in coming to the Horticulture Department so that he could stay involved in agriculture while combining academic research, field work, and extension. His favorite things about the department are the people he gets to work with. He especially enjoys the collaborative atmosphere and learning about the diversity of research projects happening here. While it was hard to choose, his favorite plant is the live oak- he finds their shape, size and character very interesting and beautiful. Outside of work, he enjoys fly fishing, lowbow hunting, and hiking with their 9 year old lab, Raven. He looks forward to meeting everyone and learning more about their research.

### Truong (Will) Nguyen, Financial Analyst:

Will joined the department this summer as our Financial Analyst. He has lived in Blacksburg for two years and before that lived in Ho Chi Minh City in Viet Nam. He was interested in joining the department to gain further fiscal experience and enjoys the friendly atmosphere. He likes all kinds of flowers, especially roses. In his spare time, he enjoys swimming, cooking and spending time with friends.



## In the News:

Pollinator conservation continues to be an important issue in Virginia with annual losses of honeybee colonies averaging around 30%. Megan O'Rourke and Laura Stange, a senior in Horticulture, have been working this summer to develop methods for establishing and managing native wildflower habitats for pollinator conservation on farmland. Their work was featured in the Virginia Tech daily news <https://vtnews.vt.edu/articles/2017/07/072517-fralin-pollinators.html> and on local television <http://www.virginiafirst.com/news/local-news/vt-student-researching-ways-to-attract-pollinators-to-crops/775448503>.



*Laura Stange working in the field.*

## In Memory

Charlie O'Dell, former faculty member in the department, passed away suddenly September 4, 2017. Charlie was 82 years old. He served primarily in an Extension role with emphasis on fruit crops, starting in 1968 and retiring in 2001. Many remember Charlie not only for his service to the department, but for his contagious enthusiasm and good humor. Charlie will be remembered fondly by those who interacted regularly with him both before and after his retirement. He carried his grounding in service through his educational experiences at Berea College throughout his career at Virginia Tech, espousing our motto in professional and personal interactions.



[http://www.roanoke.com/obituaries/o-dell-charles-robert/article\\_1f6391ed-20dd-58b6-87ae-59b36fafc988.html](http://www.roanoke.com/obituaries/o-dell-charles-robert/article_1f6391ed-20dd-58b6-87ae-59b36fafc988.html)

## Horticulture in CALS governance:

- Susan Clark is on the CALS Council.
- David Close is on the Committee on Extension and Research Program Policy.
- Tabitha Hartman, Velva Groover are our department representatives for the CALS Staff Association.
- Velva Groover also serves as Staff Senator and Pris Sears is a Staff Senator Alternate.

## Horticulture REEL summer interns a success

Jim Owen, Jayesh Samtani, Laurie Fox, and Aureliano Bombarely Gomez were horticulture faculty mentors who hosted three USDA Research and Extension Experiential Learning (REEL) undergraduate fellows this summer. The students, Luis Santos-Molina (Florida State), Gabrielle Nelson (Tidewater Community College), and Suzanne Laliberte (Virginia Tech), were part of the inaugural summer of Virginia Tech's 2017 REEL funded by USDA/NIFA. The fellowship provides students from non-agricultural backgrounds the opportunity to learn and experience basic and applied life sciences to solve agricultural and food challenges for 5 weeks on both campus and the Agricultural Research and Extension Centers (ARECs). This is a 4-year program with eight students participating this summer. Numerous VT faculty shared generously of their time, expertise, and resources to make sure these students had an exciting and well-rounded research experience, including lab, field, and field trip components.



## Leadership and connections through the International Society for Horticultural Science (ISHS)

Jim Owen with colleagues Brian Jackson (North Carolina State University and Horticulture Ph.D. alumnus), James Altland (USDA/ARS) and Mike Evans (University of Arkansas) convened the ISHS 2017 International Symposium on Growing Media, Soilless Cultivation, and Compost in Horticulture from August 20-25 in Portland, Oregon. This was only the second time the symposium has been held in the United States (the first was in Charlotte, NC in 2009). The symposium was attended by 148 industry and academic scientists from 21 countries. Attendees toured industry innovators, shared scientific

presentations, strengthened professional relationships, and identified future collaborative efforts. The proceedings will be published as an *Acta Horticulturae* in 2018.

The multi-state research group on water quality and conservation that the Jim Owen participates in was featured in *Greenhouse Magazine* because they were honored with the 2017 Experiment Station Section Award for Excellence in Multistate Research. News story here: <http://www.greenhousemag.com/article/horticultural-researchers-water-quality-conservation/>

## Congratulations to Susan Day!

This past August, associate professor Susan D. Day was awarded the International Society of Arboriculture's L.C. Chadwick Award for Arboricultural Research. This Award of Distinction recognizes individuals for their research contribution to arboriculture and is the society's top research award. The International Society of Arboriculture, with more than 30,000 members worldwide, is a nonprofit organization supporting tree care research and education around the world. VT News Article: <https://vtnews.vt.edu/articles/2017/09/cnre-susandayisaaward>

In addition, Susan Day's webinar on Soil Profile Rebuilding was the most viewed in Tree Fund's history with over 300 people joining the presentation. The video features rehabilitating compacted, poor quality soils typically found in urban environments, using a specification called Soil Profile Rebuilding. This



technique has a lasting effect and can result in as much as 84% greater canopy relative to trees in untreated soil. Watch the video here: <https://www.youtube.com/watch?v=UUt5b9lov8k&feature=youtu.be>

## Alumnus News

Gill Giese (Ph.D. alumnus) is now working for New Mexico State University as the Extension Viticulture Specialist. News release here: <http://newscenter.nmsu.edu/Articles/view/12611/experienced-winemaker-named-new-viticulturist-at-nmsu>

## Publications

Edwards KD, Fernandez-Pozo N, Drake-Stowe K, Humphry M, Evans AD, Bombarely A, Allen F, Hurst R, White B, Kernodle SP, Bromley JR, Sanchez-Tamburrino JP, Lewis RS, Mueller LA (2017) A reference genome for *Nicotiana tabacum* enables map-based cloning of homeologous loci implicated in nitrogen utilization efficiency. BMC Genomics 18: 448: <https://doi.org/10.1186/s12864-017-3791-6>

Mack R, Owen JS, Niemiera AX, Latimer J (2017) Virginia Nursery and Greenhouse Grower Survey of Best Management Practices. HortTechnology 27: 386-392: <http://horttech.ashspublications.org/content/27/3/386.abstract>

O'Rourke ME, DeLonge MS, Salvador R (2017) Insights from agroecology and a critical next step: Integrating human health. Agroecology and Sustainable Food Systems 41: 880-884: <http://dx.doi.org/10.1080/21683565.2017.1326073>. (This paper summarizes recent trends in sustainable agriculture research and calls for increased collaboration between food production and health sciences.)

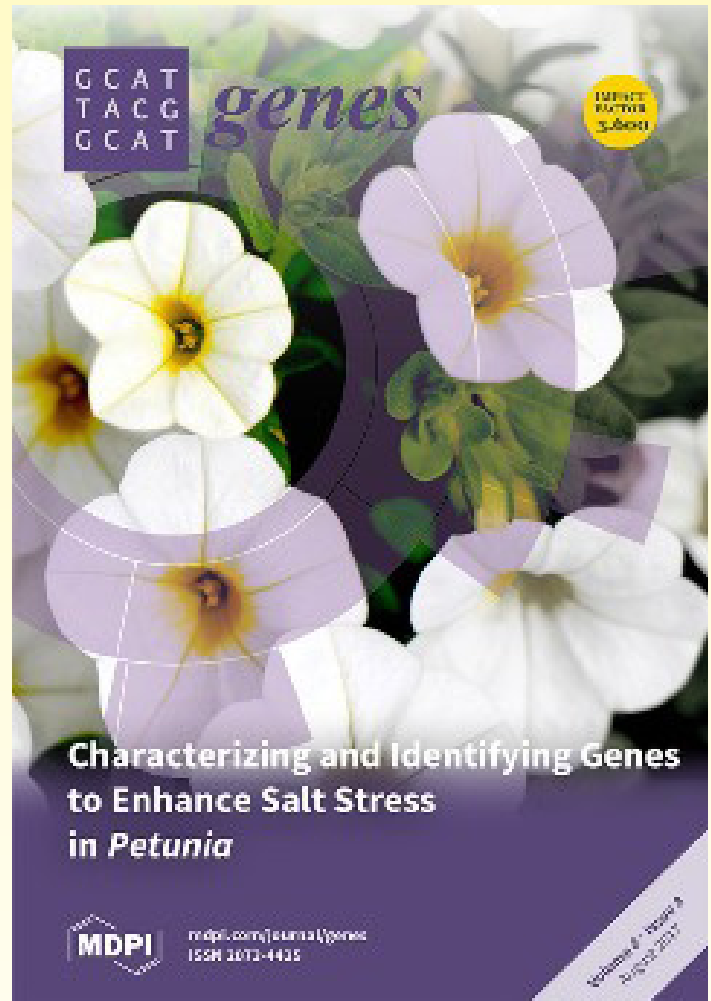
O'Rourke ME, Petersen MJ (2017) Extending the 'resource concentration hypothesis' to the landscape-scale by considering dispersal mortality and fitness costs. Agriculture, Ecosystems & Environment 249: 1-3: <http://www.sciencedirect.com/science/article/pii/S0167880917303213>. (This paper helps predict where certain insect pests will become a problem based on the amount of forest in the landscape.)

Samtani JB, Derr J, Conway MA, Flanagan RD, III (2017) Evaluating soil solarization for weed control and strawberry (*Fragaria xananassa*) yield in annual plasticulture production. Weed Technology 31: 455-463: <http://www.bioone.org/doi/abs/10.1017/wet.2017.4>

Sherman-Broyles S, Bombarely A, Doyle J (2017) Characterizing the allopolyploid species among the wild relatives of soybean: Utility of reduced representation genotyping methodologies. Journal of Systematics and Evolution 55: 365-376: <http://onlinelibrary.wiley.com/wol1/doi/10.1111/jse.12268/abstract>

Vallotton AD, Strawn LK (2017) A Guide to the Good Agricultural Practices (GAP) Certification Process. Virginia Cooperative Extension HORT-252: <https://pubs.ext.vt.edu/HORT/HORT-252/HORT-252.html>

Vallotton AD, Strawn LK, and Latimer, J (2017) Guide to Identifying Food Safety Hazards in Greenhouse Systems. Virginia Cooperative Extension HORT-254: <https://pubs.ext.vt.edu/HORT/HORT-254/HORT-254NP.html>



Villarino GH, Hu Q, Scanlon MJ, Mueller L, Bombarely A, Mattson NS (2017) Dissecting tissue-specific transcriptomic responses from leaf and roots under salt stress in *Petunia hybrida* Mitchell. Genes 8:8 <https://www.ncbi.nlm.nih.gov/pubmed/28771200>

Zhao C, Lasses T, Bako L, Kong D, Zhao B, Chanda B, Bombarely A, Cruz-Ramirez A, Scheres B, Brunner AM, Beers EP (2017) XYLEM NAC DOMAIN1, an angiosperm NAC transcription factor, inhibits xylem differentiation through conserved motifs that interact with RETINOBLASTOMA-RELATED. New Phytol. 216: 76-89: <https://www.ncbi.nlm.nih.gov/pubmed/28742236>

## Hahn Horticulture Garden News

### HHG Gala

A special thanks to all those who attended and sponsored the 13th Annual Garden Gala. After accounting for all Gala expenses, the garden team realized a net profit of more than \$12,000. These funds will be used to cover student wages, garden maintenance, equipment purchases, plant acquisitions and construction of new garden features.

Check out the photps here: [flic.kr/s/aHskZdHoey](https://flic.kr/s/aHskZdHoey)

### Congratulations to Paul Chumbley, CALs June Employee of the Month!

From his nominator “He makes hard work fun. With a positive attitude and a smile, Paul comes everyday to work at the Hahn Horticulture Garden with a willingness to help his co-workers, to guide and instruct student interns and volunteers, and to work diligently to make the Hahn Garden the most beautiful place on the Virginia Tech campus.”

### In the News

Over the summer, Stephanie Huckestein shared tips with Fox News on how to help your plants thrive in summer heat. News story here: <http://www.foxnews.com/weather/2017/07/12/how-to-keep-your-plants-from-wilting-in-summer-heat/>



**Hahn**  
Horticulture Garden

### Upcoming Events:

- **Sept. 1st to Oct. 31st** Art in the Garden: Paintings by Joe Kelley.
- The Simply Elemental Outdoor Sculpture Exhibition is **until Sept. 30th**.
- **Sept. 13th noon to 1pm** Learn at Lunch: Top Fall Flowering Perennials with Holly Scoggins
- **Sept. 28th 6-7:30pm:** Making Japanese Pickles. Preregister by 9/24.
- **Nov. 16th 6-8pm:** Artisan Bread Workshop. Preregister by 11/13.

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

