Faculty News
Todd Wehner and Elaine Levin

The Department of Horticultural Science has had a change in leadership. Dr. John Dole will become Interim Department Head, and Julia Kornegay will be stepping down to become the Director of the Graduate Program and take a teaching/research position. Let us welcome John into his new appointment and Julia into her new position.

There are several new positions being considered for addition to our team working at the Plants for Human Health Institute at the NC Research Campus in Kannapolis. One of these, the position for leafy vegetable breeder, has been frozen temporarily. It will be re-opened in the next year as the economy improves.

Faculty reappointed: Allan Brown, Dilip Panthee, and Jeremy Pattison. Anthony LeBude was promoted to a tenure position, and Mike Parker was promoted to full professor.

There were interviews during the month of October, 2010 for the new Kannapolis faculty position of Leafy Vegetable Professor. A final document outlining the Department’s response to the External Review conducted earlier this year will be distributed to the entire Department when it is completed. Several course changes and course name changes were discussed. Faculty members met with Dean Wynne in September. Information is forthcoming on research and extension budgets, and Richard Hartlage was named as our outstanding alumnus. Barclay Poling will be retiring at the end of this year.

AG*IDEAS, a program which allows students from other universities to take Distance Education classes from NCSU, and NCSU students to take Distance Education classes at other universities, was discussed. At this time, only a few universities are participating. If employees are enrolled in an accredited program, they would be eligible to participate in these classes.

Awards

The NC State-produced show “In the Garden with Bryce Lane” has been nominated for a regional Emmy Award! “In the Garden”, produced by Communication Services, is the only show of its kind currently offered in North Carolina. Viewers can also earn college credit by registering for a distance education course in horticulture which is offered through the program. Host Bryce Lane brings more than 28 years of teaching experience to the television audience. The production team includes videographer/editor Simone Keith, producer Sonya Williams Harris and graphic artist John Vanaman. The show airs Saturdays at noon on UNC-TV.

The Nashville/Midsouth Chapter of the National Academy of Television Arts and Sciences announced the Emmy nominations on November 19, 2010. Winners will be honored during a live telecast from Nashville on Jan. 29, 2011.

Anne Spafford has received the 2011 George J. and Rhoda Kriz Faculty Study Leave Award from CALS. She will receive $2000 for project-related travel expenses.

Helen Kraus and Anne Spafford’s new book, Rain Gardening in the South, published by North Carolina-based Eno Publishers, has received the Gold Award for best technical gardening book from the prestigious Garden Writers Association. This national award recognizes books that achieve the highest levels of talent and professionalism in garden communications. “The Garden Writers Association Media Awards showcase publishers “. . . that have pursued excellence in gardening communication,” says Janel Leatherman, president of GWA. “The Media Award winners have been judged by industry experts and show significant distinction and merits that exemplify exceptional work.”
Rain Gardening in the South: Ecologically Designed Gardens for Drought, Deluge, and Everything in Between was written Dr. Helen Kraus and Anne Spafford, both of whom are professors of Horticultural Sciences at North Carolina State University. Their book is the first guide for home gardeners about this important eco-friendly gardening movement that minimizes storm-water runoff, one of the leading causes of water pollution in the Southeast.

"We never think of our home gardens and landscapes as being sources of pollution," says Dr. Kraus. "However, the data are indisputable. Rain gardens are designed to eradicate the toxins we unwittingly dump into our rivers, lakes, and oceans, and at the same time to provide year-round beauty."

Lucy Bradley has been selected to receive the State Mid-Career Service Award for 2010 on behalf of the XI Chapter of Epsilon Sigma Phi. The annual meeting was held December 3, 2010 at the Lee County Cooperative Extension Center in Sanford, NC. This award honors an Extension professional with 10 to 20 years of service, who has contributed significantly to North Carolina Cooperative Extension programs.

Liz Driscoll received the Distinguished Service Award of the National Junior Horticulture Association.

On November 19, 2010, in a ceremony at the JC Raulston Arboretum, Sylvia Blankenship was awarded the International Society for Horticultural Science Fellow Award in recognition of her outstanding contribution to horticultural science worldwide. The award was presented by Dean Johnny C. Wynne.

Allan Thornton was recently recognized by the NC Vegetable Growers Association with the Educator of the Year Award at the Southeast Vegetable and Fruit Expo.

The Sidney B. Meadows Award of Merit, from the International Plant Propagators' Society, Southern Region of North America was presented to Dr. Ted Bilderback on October 11, 2010, “…in recognition of his outstanding contributions to plant propagation, the nursery industry, and his dedication to our society.” The Sidney B. Meadows Award of Merit is the highest award offered by the IPPS-Southern Region. It is based on outstanding contributions to the IPPS, plant propagation and to the nursery industry. The award recognizes dedication to the ideals of the society to "seek and share". Ted was recognized as being a long-time contributor to the education of students, to the nursery/green industry, and to the public.

Richard Hartlage, the 2010 Outstanding Alumnus for Horticultural Science and Associate Principal, AHBL, gave a lecture entitled "Twenty Years of a Life in Horticulture and Landscape Architecture". The event was sponsored by the Department of Horticultural Science and the JCRA.
Richard Hartlage has spent 20 years managing private and public gardens and is now a partner at AHBL in Tacoma, Washington, managing the Landscape Architecture Department. He has written many articles on landscape design, written and photographed Bold Visions for the Garden and photographed four additional books. Richard hybridized the Raulston allspice that bears his name; *Calycanthus raulstonii 'Hartlage Wine*', which was released from the JC Raulston Arboretum. He is currently working on private and public projects on both the east and west coasts, including the new Herb Garden at the Brooklyn Botanical Gardens and the Chihuly Project, an indoor/outdoor retrospective of Dale Chihuly's glass art in Seattle, Washington. Richard’s residential projects have been featured in countless magazines and books and his hallmarks are the creation of gardens with strong, livable outdoor architecture and rich plant palettes. Richard reflected on his career in management of public and private gardens, and showed a wide array of projects, including those that are built and some that are in design. With great wit, he shared impressions on a twenty year career, shared his philosophy of design, and gave plenty of practical, hands-on experience maintaining, designing, and building gardens for a wide range of clients.

### Staff News

**Elaine Levin**

Paige Winn will be leaving Horticultural Science, and Mary Lorscheider will be returning to us as departmental web editor. Thanks to everyone for participation in the State Employees Combined Campaign, and thanks to Dolores Lawson and Wayne Buhler, team captains, for rallying and organizing the Horticultural Science efforts. For the first time, the College of Agriculture and Life Science has achieved a participation rate of 26%, representing a 112% increase in participation from last year. The total amount of donations to the SECC from CALS is $76,360, an 18% increase over the amount donated in 2009.

SPA staff members assigned to attend EPA faculty meetings report to Horticultural Science staff about items discussed: Chris Harlow, Angela Oldham and Amy Hamilton.

Reminders were given for the October 8 Horticultural Science Picnic, the October 26 Chancellor’s installation event, and the State Employees Combined Campaign updates.

**Chris Harlow** tells us about the Fall 2010 Horticultural Science picnic, held on Friday, October 8 from 12 – 2 pm: “Indeed, the weather was absolutely perfect – quite warm for October and nothing but sun. Probably 30 or so people from the department showed up at some point, which was the perfect size for our venue.

Covered dishes were placed on tables under the “structure” out on the brick walkway, and two grills, brought by Mike Parker and Angela Oldham were placed in the middle area. Mike and Angela worked tirelessly to cook up great burgers and dogs, as well as a few veggie-version burgers for the weed-eaters. The covered dishes brought by department members were amazing. Enough food for more than 100, and all that I was able to sample was delicious.”

**Sandie Wash** put up a sun shade canopy and this was appreciated and enjoyed by various faculty, staff, and Sandie’s tiny Yorkshire Terrier, Lilli. There was enough food left over so that the attendees enjoyed hot dogs, hamburgers and side dishes for lunch on Monday and Tuesday of the following week. “After everybody had a full tummy, folks either sat and visited or took to the competition fields. It was nice to see that the crowd did not disappear right after the meal was over; lots of people stayed around to enjoy each other’s company and the nice day. Competition included croquet and corn-bag toss. Chris Harlow brought these games, and Anne Spafford brought a croquet set. Competition on the croquet court was intense, led by Julia Kornegay, our department head, herself a fierce competitor, and John Dole as the silent dark horse. Anne is a seasoned croquet veteran and zipped around through the wickets with ease. All had a good time, and while some egos may have been bruised, nobody got hurt. A successful endeavor was achieved. It appeared that the competition in the corn-bag toss was just as fierce,
with Matt Lamb leading the charge. Matt obviously had played the game before and had impeccable ‘toss’ technique.

Ultimately, the disciplined work ethic of our department members won out, and the party broke up after a couple of hours. Anybody who didn’t get a great meal and have a fun time had to have been trying hard not to do so.”

The Social Committee, headed by Barb Fair, with Mike Parker, Julie Sherk, Bernadette Clark, Kim Eaton, Christie Gordon, Dolores Lawson, Angela Oldham, Brantley Snipes and Sandie Wash has again outdone itself by coordinating and presenting a delightful, friendly, and warm gathering.

The room was darkened….black lights, mechanical spiders spiraling from the ceiling, ghostly apparitions and lots of sweets! Our Social Committee created an amazing Halloween party environment. Fun was had by all attendees, even those who walked into the faculty-staff break room expecting an uneventful trip to the mailboxes, copier or printer…..

PI ALPHA XI FALL 2010 UPDATE

Jared Barnes, President of Pi Alpha Xi reports a very productive autumn. The 2010 Pi Alpha Xi Fall Plant Sale was a great success, and profits raised from the sale go toward the horticulture allocations at the end of the year. Pi Alpha Xi did something different this year; we invited everyone who worked four hours or more to an appreciation dinner at the arboretum. Members also teamed up with Masters of Landscape Architecture students by pulling invasive weeds and doing end-of-year maintenance at the Centennial Campus Center for Wildlife Education. Be sure to mark your calendars for the 2011 Spring Plant Sale on April 9th and 10th, 2011! We hope to see you there!

Awards

Ramon Molina Bravo won (tied for first) in the Graduate Student Presentation Award for his talk "Construction of a Genetic Linkage Map for Red Raspberry (Rubus idaeus L.): Quantitative Analysis of Heat Tolerance, Prickle Density and Growth Habit.” He presented his dissertation research as an invited oral presenter at the 5th International Rosaceae Genomics Conference held in Stellenbosch, South Africa, on November 14-17, 2010. Ramon received his PhD from our department in December 2009. His major professors were Bryon Sosinski and Gina Fernandez.

GRADUATE PROGRAM
John Dole and Rachel McLaughlin

On November 7, 2010, Pi Alpha Xi participated in the clean-up at the Centennial Campus Center for Wildlife Education. This was PAX’s first community service project of the 2010-2011 school year. Students teamed up with the NCSU Chapter of the Student Society of Landscape Architects to remove invasive species from the bio-retention cells which surround the gold LEED certified building on Centennial Campus. The director of the center, Marti Kane, guided the activities and educated us on the work of landscape systems. These systems filter and remove storm water and provide habitat for native birds and animals. Pictured (from left to right): Jared Barnes, PAX President; Tyllia Pinkham, Brantley Snipes, Marti Kane, Director; Michelle Rose (MHS, LAR minor); Heather Rhymes, Sarah Elsaesser, Preston Montague, and Tipton Fowlkes.
Awards

Emily Silverman, a senior in Horticultural Science, has been awarded the 2010 Spring Meadow Nursery Scholarship of $1,500 from the Horticultural Research Institute (HRI), the research affiliate of the American Nursery & Landscape Association (ANLA). Silverman’s professional goal is to be an ornamental plant breeder. “Horticulture gave me new insight to the plant breeding world and expanded my focus to ornamentals, small fruit and vegetable crops,” she said. “I want to help the world and contribute useful introductions through plant breeding. This scholarship will help me finish my undergraduate degree and it means that I can focus more on my classes, and work fewer hours while I am in my last semesters.”

Bright, well-trained and qualified people are essential to the nursery industry. Dale and Liz Deppe of Spring Meadow Nursery, a leading source of flowering shrub potted liners and starter plants in Grand Haven, Michigan initiated The Spring Meadow Scholarship Fund in 1999. This fund is dedicated to helping aspiring students from across the country obtain a degree in horticulture. It is also Spring Meadow’s way of giving back, and sharing with others their passion for plants and the nursery industry.

NC Cooperative Extension & School Gardens: A Collaborative and Mindful Approach to Implementation Dates and Locations:

Tuesday, January 11, 9-4pm - Buncombe County Extension Center, Asheville, NC
Thursday, January 27, 9-4pm - CEFS, Goldsboro, NC

Blueberry Production
Saturday, February 19, 9-12pm - CEFS, Goldsboro, NC

Blackberry Production
Wednesday, March 9, 9-12pm - CEFS, Goldsboro, NC

For more information, please visit www.cefs.ncsu.edu.

Farmhand Foods, a new business venture that is an outgrowth of CEFS’ NC Choices initiative, opened for business in October. Farmhand Foods (www.farmhandfoods.com) brings sustainable meat products to local retail outlets and directly to consumers. The company was incubated with support from the W.K. Kellogg Foundation, the N.C. Rural Economic Development Center and the N.C. Tobacco Trust Fund Commission.

CEFS announced in November that its NC 10% Campaign had tracked more than $2 million in spending on local foods in its first four months. The campaign, which began in July, encourages consumers and businesses to commit 10 percent of their existing food dollars to local foods, and to report their spending via the campaign website (www.nc10percent.com).

Also in November, North Carolina was chosen as one of 10 states across the country to pilot the National FoodCorps program (www.foodcorps.org). A partnership between 4-H and CEFS will place 10 local FoodCorps members in five school districts across the state, bringing national attention to North Carolina’s food system work and substantially increasing school gardening capacity and youth training support in the state.

As a result of all this growth, CEFS has named two new assistant directors. Dr. Michelle Schroeder-Moreno will serve as Assistant Director of Educational Programs, overseeing and providing leadership for several ongoing and planned educational programs. Dr. Chris
Reberg-Horton will be Assistant Director of Collaborative Research, helping to pull teams together to respond to funding opportunities, facilitating collaboration among faculty and attracting new faculty.

CEFS wrapped up its 2010 Seasons of Sustainable Agriculture Workshop Series in mid-November. This year’s series included CEFS’ first-ever webinar, and a video recording of the webinar was posted this month on the CEFS website [www.cefs.ncsu.edu/workshops.html](http://www.cefs.ncsu.edu/workshops.html).

More CEFS news can be found at [http://www.cefs.ncsu.edu/newsevents/recentnews.html](http://www.cefs.ncsu.edu/newsevents/recentnews.html).

**JC Raulston Arboretum (Raleigh)**

Ted Bilderback

The new Lath house (see below) construction designed by Frank Harman Architects was finished the first week of October, 2010. The Master Plan Group worked diligently to complete the pathways and bed design for the Lath house. Bed construction and planting the lath house will be a major focus for winter and spring, 2011.

**Jennie Cowan** (see next column) joined the JC Raulston Arboretum in September as a full time volunteer from September through December. Jennie is from the UK and she did not have a work permit, but was experienced in developing children and youth programs. She came to the JCRA just when we realized that we should develop a science educational curriculum which focused on meeting the needs of traditional elementary and home schooled children. **Liz Driscoll** worked with Jennie, and also presented a workshop about youth programs. Key to launching our children’s program were training sessions for interested volunteers, taught by Jennie Cowan. We expect to launch our first children’s program events during spring, 2011.

The **Friends of the Arboretum Annual Plant Distribution** took place on October 2, 2010, at the JC Raulston Arboretum. This is an annual epic event of public horticulture, where thousands of choice and rare plants are freely given away.

On November 4, 2010, **Frank Hyman**, who earned his BS in Landscape Horticulture from NCSU’s Horticultural Science and whose writing appears in Horticulture, Urban Farm and Fine Gardening magazines, gave the **Friends of the Arboretum Lecture** entitled “Perennial Vegetables: Asparagus, Artichokes, Fiddlehead Ferns, and More?” Frank loves growing annual vegetables but has cottoned to perennial vegetables partly for their taste, but also because there is less work involved, as they don't need to be replanted each season. Frank shared slides and growing advice on a wide range of vegetables that bounce back every spring, like rhubarb, lovage, sunchokes, prickly pear, sorrel, and giant Solomon Seal. His blog is [www.liberatedgardener.net](http://www.liberatedgardener.net).

**Centennial Campus (Raleigh)**

George Allen and Sergei Krasnyanski

Our new NSF grant (GEPR: Epigenome dynamics during DNA replication) will become active on January 1, 2011. The grant is for five years, with a final amount of $6.7 million. Our group from NCSU includes W.F. Thompson (PI, Plant Biology), Linda Hanley-Bowden (Co-PI, Biochemistry) and **George Allen** (Co-PI, Horticultural Science). Rob Martienssen (Cold Spring Harbor, NY) and Matt Vaughn (Univ. Texas) are also part of the project. The major
focus of this grant will be to study the processes that transmit epigenetic marks through multiple rounds of DNA replication and cell division in Arabidopsis and maize.

This grant also includes a significant outreach component in which researchers from NCSU will continue our collaboration with two NC middle school teachers from Granville County, and the NC Museum of Life and Science. We will create and test a genetic “Science in a Suitcase” kit for middle school students. The kit is designed and "field tested" by the middle school teachers and their students, and includes a two-day workshop for 10 middle school science teachers during each of the first three years of the project. The workshop provides hands-on activities and will address kit contents, the North Carolina Standard Course of Study requirements, classroom implementation, overview of genetic science at the middle grades level, and assessment of learning strategies. The project has the potential to reach more than 1,000 students in 10 middle schools in Granville and Durham Counties.

Dr. Sergei Krasnyanski, Senior Researcher at the Plant Transformation Lab, has also been awarded a $53,000 grant from Cotton Incorporated entitled "Development of an Enhanced Cotton Transformation Protocol Using GFP as a Model Transgene and FT gene for Reducing Flowering Time". The focus of this project is development of an improved method for cotton transformation, and to produce cotton that over-express the FT gene, which reduces flowering time and helping cotton breeders to rapidly develop improved germplasm.

We recently submitted a grant to NSF-BREAD for 3 years ($1.4 million) entitled "BREAD: Creating Durable Resistance to Multiple Diseases of Bananas and Tomatoes for African Farmers". The goal of the proposed project is to use RNA interference (RNAi), or gene silencing, to provide durable resistance to multiple diseases and pests of both banana and tomato. The project is a collaboration between NCSU (Horticultural Science and Plant Biology), Venganza (a small biotech company located at Centennial Campus), and the National Agricultural Biotechnology Centre in Kampala, Uganda.

The PTL is also part a proposal that was recently submitted to the American Floral Endowment entitled "Engineering Fungal Resistance in Potted Plants using a Gene for Mannitol Dehydrogenase". John Williamson (Horticultural Science) is the project PI, and the goal of the project is to develop Gerbera and Poinsettia that over-express MTD. Fei Ding (as part of his thesis) has shown previously that MTD can confer Botrytis resistance in petunia hybrida.

Other collaborative projects in which the PTL is involved include the development of an improved yam transformation system (collaboration with NC A&T) and the use of carbon nanoparticles for transforming plants (collaboration with Nagoya University, Japan).

Finally, Hao Zhu completed his MS thesis to graduate in December. Hao's thesis is entitled "Strategies to Improve the Post-Harvest Characteristics of the Cut Rose Flower: Botrytis Susceptibility, Transgenic Resistance, and Differential Gene Expression during the onset of Bent Neck and Petal Bluing". Hao will be working in his home province of Sichuan upon his return to China.

Horticultural Crops Research Station (Clinton)
Allan Thornton
Field work has come to an abrupt end with the bitterly cold weather. A late collard fungicide trial was the final victim of the unusually cold December.

NC Research Campus (Kannapolis)
Mary Ann Lila, Tara Vogelien and Penny Perkins-Veazie

N.C. Research Campus Cluster Hires
Cluster hire candidate interviews are under way for the recruitment of up to three positions (Pharmacogenomics, Plant Metabolic Pathway Engineering and Systems Biology) for the Plants for Human Health Institute at the N.C. Research Campus. Candidates will visit main campus on December 2 and 14, 2010 and on January 11, 18 and 25, 2011 to present seminars. All faculty and staff are invited to attend these seminars; details on times and location will be announced via email flyer from the Dean’s Office.
It's officially winter in the mountains with temperatures dropping to 17°F the last few nights. Steve McArtney was so put off that he left for summer in New Zealand. The rest of us are huddled around a camp stove trying to stay warm.

Vernon James Research and Extension Center (Plymouth)
Mark Clough

This fall has been a busy time, with tours of the VGJREC/TRS by teacher groups, the biotech community, and even a few politicians and/or their aides. Mark Clough has also gone to several schools for "Career Day" to help give exposure to science based careers. In the greenhouses, our potato seedlings that were started in August of this year are just now beginning to be harvested. It looks like it's going to be a good crop of mini-tubers for field evaluation next year. In January 2011, Mark Clough and Craig Yencho will be going to the Potato Expo in Las Vegas, Nevada. Mark will be attending courtesy of the North Carolina Potato Association, and he will be on hand to assist in the manning of their booth.

HORTICULTURE FACILITIES
Julia Kornegay and Todd Wehner

Julia Kornegay is moving to 168 Kilgore in preparation for her new assignment in Horticultural Science, and Elisabeth Meyer has moved to 112 Kilgore to join other postdocs there.

The postdoctoral offices in Kilgore Hall have been remodeled and expanded. This includes our original room (105), as well as 234 Kilgore, for those working with Steve Clouse.

Departmental Newsletter Committee
Elaine Levin, Rachel McLaughlin, Todd Wehner
Send items for the newsletter to Todd Wehner (todd_wehner@ncsu.edu) or to Elaine Levin (elaine_levin@ncsu.edu)