

Department of Plant & Environmental Sciences
Fall 2018 Newsletter

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Krystal Goes to D.C.

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Dr. Shukla, ACES Aggies
Global Program Coordinator
in Yangling China

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Rolston Sh. Hilaine

Department Head

Introduction

In this newsletter, you will notice that many students completed their programs. Our students excelled during their time with the department and many will continue to excel long after they graduate. Congratulations to Krystal Vargas for winning the best student research poster in medicinal plants at the 2018 meeting of the American Society for Horticultural Scientists. Current members of the NMSU Floral Team excelled at West Texas-New Mexico Florist Association competition, and a former NMSU Floral Team Alumnus won a scholarship to the renowned Floral Design Institute. At the 2018 National Association of Plant Breeders Annual Meeting, a 2013 Plant and Environmental Sciences Alumnus was awarded the first prize in the student poster competition. I thank our dedicated staff and faculty who continue to add value to our student lives.

Our faculty continue to conduct outreach and research around the world and nationally. In this newsletter we highlight the international work of Dr. Shukla and the national project of Dr. Carroll's research group.

The National Association of Plant Breeders (NAPB) is the outreach group that represents plant breeders in federal, state, commercial and non-government organizations. So, Plant and Environmental Sciences is pleased to note that Dr. Pratt along with graduate student Subhankar Mandal, and undergraduate student Samantha Hilborn attended the NAPB meeting.

Our faculty, staff, students, and supporters work tirelessly to strengthen the Department, and this brings me to Giving Tuesday which is on November 27, 2018. A very generous alumnus has offered \$20,000 in one to one matching funds for departmental scholarships. This Giving Tuesday, I encourage you to take advantage of this opportunity to make a difference in the life of a Plant and Environmental Sciences student.



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Highlight: PES Student Gets First Place

The Annual Meeting for the American Society for Horticultural Science (ASHS) met in Washington, D.C. from July 31 to August 3, 2018. ASHS is respected nationally and internationally as a society dedicated to promoting and encouraging scientific research in all sectors of horticulture. The annual conference was well attended with over 1000 attendees. ASHS is also comprised of Professional Interest Groups which promote research interaction and collaborations within a horticultural branch. The Herbs, Spices, and Medicinal Plants Group is focused on promoting scientific research and education on medicinal plants including research on botanical, cultural, environmental, genetic, physiochemical, and pharmacological aspects of these

plants. As part of the conference, this professional group recognizes outstanding contributions to the field and awarded the best student research poster in medicinal plants. This year, Krystal Vargas, a PES undergraduate horticulture major won the best Herbs, Spices, and Medicinal Plants research poster. Her research was titled, "In Search of Nutri-chemicals in Yellow Capsicum species" which provided nutraceutical profiles for chile peppers. Krystal is a junior in the Masters Accelerated Program, a MARC (Maximizing Access to Research Careers) program student, and was previously funded by a USDA NIFA sponsored Broadening Agricultural Science for Hispanics or BASE



Spring 2018 Graduating Class

Congratulations!



Front row, from left to right: Alicia Cruz, GEBT; Anthony Colin, Hort; Luis Medina Iruegas, Turf; Harmanpreet Kaur, M.S.; Naima Khan, Ph.D.; Bahiyah Mitchell, GEBT; Angela Pack, GEBT; Jordan Martin, Hort.

Back row, from left to right: Gabriel Clark, Hort; Patrick Kenney, Hort; Jason Fechner, Hort; Alonso García, M.S.; Forrest Titla, Hort; Tyler Kline, Hort; Marissa Alexander, ES; Micah Funk, Agro; John McCoy, M.S.; Rolston St. Hilaire, Department Head

ACES faculty visits Northwest A&F University, Yangling, China

Dr. Manoj K. Shukla, ACES Global Initiatives Program Coordinator and Professor of Soil Physics, visited Northwest A&F University, Yangling, China from July 25 to Aug 09, 2018 at their invitation. Dr. Shukla taught a course on Natural Resources (Soil and Water) with about 22 students attending the intensive summer course (3-cr). He also visited the Agricultural Experiment Station of NWAU Univ., Qin mountains, and Luoyu reservoir. During the visit, Dr. Shukla interacted with Associate Dean, some faculty members, and graduate students, to discuss joint research, and student exchange. A research publication was finalized during the stay in Yangling. A visit of undergraduate students from NWAU University during the summer of 2019 is currently under development. Dr. Li Peiling a faculty member at Jiangxi Agricultural University and NWAU University Alum is expected to complete the sabbatical with Dr. Shukla in the PES department by the end of November 2018.



Dr. Shukla with students attending course on Natural Resources

He visited China Agriculture University (CAU) from June 19 to July 8, 2018. Dr. Shukla served as one of the five international experts to assess CAU's Agricultural Engineering program. Dr. Shukla gave two talks to faculty and graduate students and discussed research with graduate students. Dr. Shukla also taught a non-credit course on "Soil Water and Salinity Management" at the Shiyanghe Experimental Station of CAU that was attended by about 20 students. Rod McSherry, Paul Tian, and Manoj Shukla also met with Vice-President Internal Office of CAU. During the visit, a tentative plan was developed for the visits of CAU faculty to the NMSU campus during 2019. Currently Ms. Hui Yang, a graduate student from China Agriculture University is working with Dr. Shukla in the PES department.



Dr. Shukla with graduate students at Shiyanghe Experimental Station, Wei City, China



Dr. Shukla with Dr. Du and Dr. Wu in Hunan Agriculture University

Dr. Shukla was invited by Hunan Agricultural University (HAU), Changsha. Accompanied by Dr. Du, Vice-Dean of CAU, he gave a talk to faculty and students. He also visited the HAU experimental station (a large weighing type lysimeter facility) outside the city of Changsha.

West Texas-New Mexico Florist Association Competition



Pictured left to right: Donna Farmer; Amber Ortiz; Stacey Swope; Ramon Quiroga; and instructor Sabine Green

The NMSU Floral Team traveled to Lubbock to attend the West Texas-New Mexico Florist Association (WTNM) annual convention and design competition, August 3 – 5, 2018. Coach Sabine Green, AIFD, CFD, took three students with her; they participated in both the Dorsey Memorial Cup and the Silver Cup design competitions. These competitions are open to any member of the WTNM professional florist association; this means NMSU undergraduates were competing against professional florists in both competitions.

Results are as follows:

The Dorsey Memorial had five competitors in this design competition, and NMSU student Donna Farmer took first place. NMSU student Amber Ortiz took second place with \$75 WTNM scholarship for seminars of her choice. Donna received \$150 WTNM scholarship to use at a floral design seminar of her choice and a scholarship to the Teleflora Education Academy.

The Silver Cup had seven competitors. NMSU student Stacy Swope placed 2nd in this competition. She was outranked for first place by a NMSU Floral team alumnus, Ramon Quiroga, who is currently the floriculture instructor at Gadsden High School in Anthony, NM. Ramon won a \$1,000 scholarship to the Floral Design Institute.

Additionally, NMSU Floral team held their annual fundraiser for the WTNM Future Florist program, in which they hosted a "body flower bar" and sold wearable floral art of the gala that Saturday night. Funds collected went into the WTNM Future Florist program, which is a program geared toward the children of members from the WTNM membership, encouraging retention in the industry.

Finally, instructor and coach, Sabine Green, AIFD, CFD, has been elected to office as the 2018-2019 president of the West Texas New Mexico Florist association. She will serve the local floral industry through the organization for a single year term.

Students Gain Hydrology Field-Work Experience Through Summer Research Project in TN



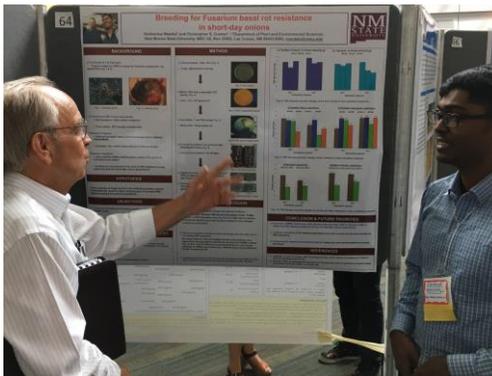
Chris Kubicki and Tanzila Ahmed

This summer Dr. Carroll’s group continued surface/groundwater exchange data collection along the East Fork Poplar Creek in Tennessee in support of contamination cleanup for the Oak Ridge National Laboratory. Data collected from 40 in-stream piezometers (80 samples this summer) installed in the streambed sediments was collected and analyzed. Two in-stream tracer tests (salt solutions injected upstream and monitored downstream) were conducted (477 samples from this summer) to characterize the transport and solute exchange between the stream and the streambed sediments. Spatial distribution of the shallow surface soils and the limestone bedrock was delineated using electrical resistivity and induced polarization geophysics including 18 transects that were conducted at 1 meter spacing this summer. The group had a lot of fun in Tennessee, got experience working with scientists at the Department of Energy National Laboratory, and completed data collection needed for their graduate degrees. The results will also support the cleanup of contamination in the stream sediments and advance our understanding of surface/groundwater exchange.



Left to right: Amanda Lara, undergrad; Tanzila Ahmed, M.S.; KC Carroll, instructor; Peter (Chia-Hsing) Tsai, Ph.D. and Chris Kubicki, M.S.

National Association of Plant Breeders Annual Meeting at Ontario, Canada



Dr. Wayne Smith of Texas A&M University visits Subhankar’s poster “Breeding for Fusarium basal rot resistance in short-day onions.”

Dr. Richard Pratt and Ph.D. graduate student Subhankar Mandal recently attended the annual meeting of the National Association of Plant Breeders hosted by the University of Guelph in Ontario, Canada. Also in attendance was Dr. Ian Ray’s former M.S. graduate student Nick Santantonio who gave an oral presentation entitled “Homeologous epistasis in allohexaploid wheat: the search for an immortal hybrid.” He recently completed his Ph.D. at Cornell University. Undergraduate alumnae, Samantha Hilborn who is now undertaking M.S. research at UC Davis also attended the meeting.

2013 PES alumnus Paul Mihalyov presented first prize for poster “Genomic prediction strategies for evaluating trait stability in a multi-parent hexaploid wheat population” he is now a Ph.D. student at Washington State University



Pictured left to right: Autumn Pearson; Alba Lucker; Melissa Meyers; Michael Kuechmann and Tristin Ramirez

Environmental Science Student Organization (ESSO)

The Environmental Science Student Organization helped beautify Las Cruces on Saturday, September 22, 2018, by picking up litter along the ditch that runs behind and south of the Mesilla Park Post Office. Shown in the picture below, from left to right, are Autumn Pearson, Alba Lucker, Melissa Meyers, Michael Kuechmann and Tristin Ramirez. They collected over ten large garbage bags of trash!

The club meets the first and third Tuesday of each month at 5 pm in Skeen Hall 120N. Everyone is invited!

The College of Agricultural, Consumer and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research, and Extension programs.

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