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Connecting.
Serving.**

OCTOBER 2014 NEWSLETTER

INSIDE THIS ISSUE:

Ogden College News

WKU FARM HARVESTS FIRST INDUSTRIAL HEMP CROP

Thursday, September 11th marked a big day for student volunteers and staff at WKU Farm. The first industrial hemp crop was harvested with volunteers cutting the hemp by hand.

The crop is part of a joint effort with the University of Kentucky. Data will be collected regarding fiber production and the nitrogen levels the hemp needs to grow well. This data will be compiled by staff at UK and sent to the Kentucky Department of Agriculture. Paul Woosley, WKU Agriculture Associate Professor, stated, "The data gathered at WKU will help to determine which seeds and fertilization rates are most successful with the type of soil common in the area."

This joint effort with UK is made possible by a special provision in the federal Agricultural Act of 2014 which allows state agriculture departments and institutions of higher learning to grow industrial hemp to study hemp growth and marketing. WKU is one university of many deciding to take part in this research effort.

According to WKU Agronomy professor Todd Willian the hemp planted at the WKU Farm grew well even though planted during a period of drought due to a delay in seed delivery. Dr. Willian named uses of the plants ranging from making clothing and concrete to a material for bedding.

For the full article in the BG Daily News click here: [Hemp Harvest](#).

Paul Woosley, associate professor in the Agriculture Department, talks to the volunteers about harvesting, bundling and weighing the hemp plants.



Pictured above are the 2014-15 Ogden College of Science & Engineering Student Ambassadors
Left to right: Ryan White, Ellen Vice, Kyle Stewart, Tori Hampton, Tyler Smith, Elizabeth Oates

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WKU WELL REPRESENTED AT KENTUCKY INNOVATION AND ENTREPRENEURSHIP CONFERENCE IN LOUISVILLE

Thirteen posters were presented by WKU faculty and students at the Kentucky Innovation and Entrepreneurship Conference in Louisville on September 5th. Twelve of the posters were presented by individuals from Ogden College. Several collaborative projects were on display along with a wide array of participation from departments all across campus such as Marketing, CIS, Sociology and Kinesiology, Recreation & Sport.

Presenter	Department	Poster Title
Keith Andrew	Physics & Astronomy	A Strength Characterized Nanofiber Modified Concrete Substrate
Keith Andrew	Physics & Astronomy	A Coupled ODE Meme Based GIS Model for an Ebola App from Data Mining Twitter
Ferhan Atici	Math	Parameter Estimations of Sigmoidal Models of Cancer
Jason Crandall	Kinesiology, Recreation & Sport	Bingocize TM 3.0: A Unique Mobile Application for Improving Physical and Mental Fitness in Older Adults
Vladmir Dobrokhotov	Physics & Astronomy	Energy Efficient Portable Unit for Real Time Monitoring of Environmental Hazards and Physiological Characteristics of First Responders
Ashely Duvall	Agriculture	Automated Estrous Detection in Cattle
Grace Egbujor	Physics & Astronomy	Surface Microstructure Evolution of Metallic Specimens Using the Large Chamber Scanning Electron Microscope
Paige Huzyak	Chemistry	Carbon-based Siloxane Nanoarrays for Power Generation from Waste Heat
Jerry D. Monroe	Biology	A Zebrafish Assay for Testing Ototoxicity of Platinum-Based Anti-Cancer Drugs
Matthew Nee	Chemistry	Real-time Monitoring of Photocatalytic Reactions
Eric Steinfelds	Physics & Astronomy	Single-Cell Power Generator with Multi-Decade Performance using Century-Scale Recyclable Materials
Bangbo Yan	Chemistry	Development of Novel Porous Materials for Mercury Removal
Leyla Zhuhadar	Computer Information Systems	Semantically Enriched Massive Open Online Courses (MOOCs) Platform

New Department Chair Appointments

Dr. Greg Arbuckle (Department Chair, Architectural & Manufacturing Sciences) earned his BS degree in Mechanical Technology in 1996 from Indiana State University. He received his MS in Industrial Technology from Eastern Illinois University in 1999. He then acquired his PhD in Technology Management in 2004 from Indiana State University. His interests are in quality assurance, robotics, automation and 2+2 program development.



Dr. Greg Arbuckle



Dr. James Gary

Dr. James Gary (Department Chair, Computer Science) is originally from Louisville, KY. He earned a BA from Indiana University Bloomington as a double major in Physics and Mathematics. He then earned a MS in Computer Studies from North Carolina State University in Raleigh. After working as an instructor of Computer Science for three years at Winston Salem State University, he returned to Kentucky to work as an instructor at the University of Kentucky in Lexington while he completed his PhD. He then worked for three years as an assistant professor of Computer Science at Cameron University in Lawton, Oklahoma before coming to WKU in 1998. He plays the banjo and rides his Harley to work most days.

Article continued on page 3

New Department Chair Appointments (cont.)

Dr. Kelly Madole (Department Chair, Psychological Sciences) received her PhD in Psychology from the University of Texas at Austin in 1992 and has been at WKU since 1999. She has authored or co-authored numerous articles, chapters, and conference presentations in the area of infant cognition, especially the early development of object categorization. More recently she has examined the development of social categorization in children and young adults. At WKU, she teaches courses in Developmental Psychology and Psychological Research Methods. She has previously served WKU as Interim Dean of Graduate Studies and Research and as University Senate Chair. Kelly is married to Lance Hahn and she has two children who take up most of her spare time. In the very few minutes left, she enjoys cooking, reading, and speculating about the role of nature and nurture in BBC's thriller "Orphan Black."

Dr. Kelly Madole



GIRL POWER! GIRLS EMBRACE SCIENCE AT SKyTeach EVENT

Over two hundred girls in grades 5 through 12 had the opportunity to explore various topics in math, technology, engineering and science during exciting interactive sessions. SkyTeach and Ogden College sponsored "Girls In Science Day" at Snell Hall on Saturday, September 6th. Attendees met Ogden Dean Dr. Cheryl Stevens who spoke to them about having high expectations for themselves and setting strong goals. Students also met other women employed in STEM careers. A pizza lunch was provided and at the end of the day, participants viewed a spectacular Chemistry magic show by Alicia Pesterfield (pictured below left).

To view a full article in the BG Daily News, click here: [Girls Seek Science](#)



Photos above and below by

Bryan Lemon, WKU



Ogden College of Science & Engineering Congratulates our 2014 Staff Excellence Award Recipients



Administrative Support Winner

Wendy DeCroix, Office Coordinator
Geography & Geology Department



Skilled/Technical/Paraprofessional Winner

Jeremy Waddell, Manager, Dairy Herd
WKU Farm

GREEN RIVER PRESERVE CELEBRATES

10th ANNIVERSARY *by WKU News*



The WKU Green River Preserve's Mission is to foster knowledge and protection of the natural heritage of this highly diverse region. The 1520 acre site is located in Hart County and includes seven miles of river frontage. In ten years hundreds of endangered mussels have been released, more than 14,000 trees have been planted, wildlife and plants have been inventoried and numerous student research projects have been conducted.

The Preserve marked its tenth anniversary with a celebration on Saturday, September 27th. The event included remarks from WKU President Gary Ransdell, Dr. Terry Wilson of WKU's Center for Environmental Education and Sustainability, Sarah Craighead of Mammoth Cave National Park, Dr. Ritchie Kessler of the Kentucky Heritage Land Conservation Fund Board and WKU students and faculty.



WKU President Gary Ransdell speaks to guests at the 10th anniversary celebration for the Green River Preserve. Photo by Bryan Lemon

As part of the celebration festivities, the historic Gardner House was open for tours. The house is over 200 years old and is being restored by WKU's folk studies program. Visitors could also participate in short hikes or canoe trips to tour the area. [Click here to view full article](#)

SUMMER HAPPENINGS AT THE GRP

by Dr. Ouida Meier

The preserve closed on a 16.6 acre tract addition, thanks to the WKU Research Foundation. This area is ideally suited for a future research and education campus at the Preserve. The total size of the Preserve is now 1520 acres.

Summer brought several groups of prospective WKU students to the Preserve for excursions with canoeing to include the GEAR Up program with students from all over Kentucky, A Jr. ROTC group from Allen-County Scottsville High School, and some other Friends of the Preserve. We hope to see all of these students as future Hilltoppers!

In addition Darlene Applegate, a WKU archaeologist, led students in her Archaeology Field Camp course in the careful work of excavating and documenting the site where the bricks for the historic Gardner House at the Preserve were made over 200 years ago. The kiln allowed some of the bricks to be fired specially to produce a shiny black glazing along one edge, and this was incorporated into the Flemish Bond construction design of the house—a pinnacle of engineering for strength and aesthetics two centuries ago in Kentucky.

We were honored to host Kentucky Wounded Heroes and their families for two canoeing weekends in August. We thank them and their families for their willingness to serve and for what this service has cost them. The work of many friends of the Preserve, including Chuck Reed, Kerry and Curtis McDaniel, and volunteers from the Heart Co. Volunteer Fire Department, make it possible to host these families.

Plants and animals at the Green River Preserve are shifting from summer into autumn modes. We're continuing long-term research studies and conservation projects, have new graduate students and research projects starting, new classes of students visiting and doing field work, and new opportunities for K-12 teachers and students. It's an exciting time, and we'll let you know more about all of it in coming days.

Mathematics



The Mathematical Association of America, KY section, awarded Dr. Tom Richmond (pictured at left) its Award for Distinguished College or University Teaching of Mathematics in recognition of his extraordinarily successful teaching. Congratulations, Dr. Richmond!

The 34th Annual Mathematics Symposium will be held in Snell Hall October 10-11. Keynote Speakers are Professor Robert L. Devaney from Boston University and Professor Louis H. Kauffmann from the University of Illinois at Chicago. Events begin at 4:30 PM Friday and 8:00 AM on Saturday. For more details visit the following link: [Math Symposium](#) or call 270.745.3651.



*Congratulations to
Dr. Bruce Kessler,
Mathematics
Department Head,
for receiving the
13th annual
Spirit of WKU Award.*

34th Annual Mathematics Symposium


WKU

Western Kentucky University
Bowling Green, KY
October 10-11, 2014 in Snell Hall
(Friday starting at 4:30 PM & Saturday at 8 AM)

Keynote Speakers
Professor Robert L. Devaney
(Boston University)
Professor Louis H. Kauffmann
(University of Illinois at Chicago)

For More Information:
Mathematics Department Office at (270) 745-3651
Dr. Samangi Mmasanghe at (270) 745-3154 or
samangi.mmasanghe@wku.edu
<http://www.wku.edu/math/symposium2014.php>

- Free registration!
- Student funding available!
- Free refreshments and free pizza!
- Student presentations are especially welcome!
- Talks on any topics related to mathematics are welcome!

Title and abstract must be submitted to Samangi Mmasanghe by Oct. 1, 2014

Sponsored by: NSF grant DMS-0846677 through the MAA Regional Undergraduate Mathematics Conference program • Ogden College of Science & Engineering • Carol Martin Gatten Academy of Mathematics & Science • Department of Mathematics

Computer Science

GATTON STUDENTS DEVELOPING GOOGLE GLASS APP

Gatton students Logan Houchens, Peter Kaminski and Lydia Buzzard, pictured below, are working on an app for WKU using Google Glass that will help college students decide where and what to eat. "This will be an aid for university students navigating college life," said Buzzard.

Google Glass is a sophisticated piece of eyewear that provides a mini computer screen for the wearer.

The students had to first learn about computer programming through a special programming option just for Google Glass. Next, the students worked with WKU IT Division to collect information such as transit schedules and parking information, dining facility schedules, meal plan information, computer lab information, campus directions, WKU events and WKU News. The idea is to set up information retrieval for the Google Glass user that provides the facts within 4 seconds of a request.

The Google Glass user looks into the little screen on the right side of the glasses, then taps the side pieces to advance screens or access screen options. The same information can be pulled up on a smartphone, just not as quickly.

Uta Ziegler, professor of Computer Science at WKU, is mentoring the students.

Click [here](#) to view full article in BG Daily News.



Photo by Clinton Lewis

Agriculture



2014 ASSET Conference Students

WKU VINEYARD PRODUCING GREAT RESULTS

WKU Vineyard Manager Ryan Phelps along with undergraduate student employees produced an excellent crop of grapes for the second consecutive year. Most of the wine grapes were marketed to Crocker Family Winery of Franklin, KY, and the seedless grapes were sold at farmer's markets and at the WKU Floral Shop. For the first time grape juices and jellies were produced from WKU grapes via an offsite commercial kitchen. Grape jelly and purple grape juice made from Concord and Niagara varieties and a white grape juice made from the variety Villard Blanc were also marketed.

The vineyards were again utilized to train students enrolled in the introductory Viticulture class in pruning and shoot thinning techniques. Additionally, the class assisted with planting the newest vineyard comprised of 200 seedless varieties, including 'Glenora', and 'Somerset'. Despite the dry weather, another good yield is expected for the 2014 crop.

Three sections of the Summer Vineyard Operations course were offered this year. This is a hands-on learning course where students participate in a variety of activities such as canopy management and netting for bird management. Ryan is ably assisted this year by undergraduate assistants Andrew Wurth, Eva Ross, and Mitchell Lyons.

The vineyards are located just south of the L.D. Brown Agricultural Exposition Center. Visitors are more than welcome! Call (270) 745-3151 or email todd.willian@wku.edu or ryan.phelps@wku.edu to schedule a visit!



Students in the Summer Vineyard Operations course working at the vineyard on WKU's Farm

ASSET CONFERENCE HOSTS TWENTY-SEVEN STUDENTS FROM FOUR STATES

WKU's Department of Agriculture hosted 27 students at the ASSET (Agriculture Students Striving for Effective Tomorrows) Conference in June. The students came from Ohio, Kentucky, Indiana and Tennessee. The five day conference is designed for students who have completed their junior year of high school and are interested in attending college and studying Agriculture.



TURFGRASS MANAGEMENT NEWS



WKU played a role in this year's PGA Championship at Valhalla in Louisville, KY. Luke Headley, Blake Dewsnap, and Doug Dunleavy worked at Valhalla all summer as interns.

Sean Konsavich and Paul Woosley joined these three students as volunteers during the PGA tournament. Dr. Woosley spent most of his efforts cleaning out the water features (where he couldn't mess up!) while his students mowed greens, tees, and performed other more critical tasks. As usual, it wouldn't be Valhalla if it didn't rain. The tournament winner, Rory McIlroy, did autograph a squeegie for the staff. What a great week and what an exciting tournament!

CLARICE ESCH AWARDED FULBRIGHT

Clarice Esch was awarded the Fulbright Scholarship to Costa Rica in August. In May, Clarice Esch and Dr. Martin Stone travelled to Costa Rica on a grant. They taught local native producers how to graft tomatoes.



Engineering



WKU OFFERS FLOODPLAIN MANAGEMENT DEGREE

Western Kentucky University now has the first U.S. 4-yr floodplain management degree. The announcement was sent to several in the floodplain management community and it made the main web page of the Association of State Floodplain Managers. With 15,000 members, this is the largest U.S. organization dedicated to FPM. Please [click here](#) to see their web page.

DR. WARREN CAMPBELL WINS JOHN IVEY CERTIFICATION AWARD

The John Ivey Certification Award, established in 2001, recognizes exceptional efforts to promote the professional certifi-

cation of floodplain managers. This year, the award went to Dr. Warren Campbell, Hall Professor of Civil Engineering at Western Kentucky University. Campbell, who serves on Certification Board of Regents, promotes the CFM program in a university setting, and more than 50 of his students have passed the CFM exam. He teaches total immersion floodplain management that could take students to the depths of a cave or the dry flats of the desert. He coordinates the only FPM minor in the US, and is currently developing a Bachelor's degree with concentration in FPM, while serving as the Co-Chair of the Higher Education Committee.

Dr. Campbell stated, "My goal since arriving at WKU is to make Western synonymous with floodplain management. With the creation of the 1st minor in floodplain management in 2007 and the 1st 4-year degree in 2014, we are making progress toward this goal."



Dr. Warren Campbell

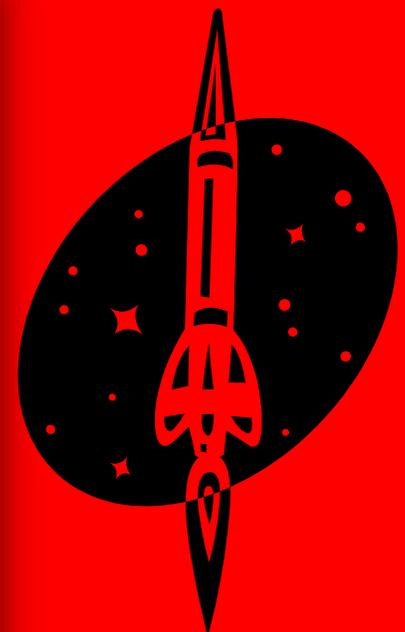
STEMshot! Rocketry Competition

Date: Saturday, October 25, 2014

STEMshot! is a compressed air rocketry competition giving students the opportunity to engage in a challenging real-world problem based activity designed to enhance student's critical thinking skills and understanding of next generation science content. Teams, grades 4-12, participate in two different competitions in two locations. One competition will take place in WKU's Center for Research and Development facility ("the old mall"). Here participants will demonstrate their ability to work with multiple variables (launch angle, air pressure, rocket length & mass) to predict the performance of a rocket of their own design. The second competition, which could take place at the Aviation Heritage Park, will have students vying to launch a rocket with a single goal of having the longest flight time. While at the park, we hope that representatives of the Aviation Heritage Park Board could be present to share the stories of each of the planes in hopes to connect the student efforts directly with our past and their future.

The STEMshot! initiative is a collaborative effort between Western Kentucky University's Ogden College (Department of Engineering & SKyTeach program) and the Green River Regional Educational Cooperative (GRREC). GRREC serves 41 school districts providing professional learning opportunities to teachers and administrators with the sole purpose of increasing student success.

For more information, contact Brian Womack (Brian.Womack@grrec.ky.gov) at GRREC, or John Inman (john.inman@wku.edu) in WKU's Ogden College of Science and Engineering.



Geography & Geology



WKU group conducts water training in Jamaica

Over the past several months, Dr. Jason Polk (pictured above) led two training workshops in Jamaica in partnership with the Jamaican Water Resource Authority and the International Atomic Energy Agency. These workshops focused on capacity building and groundwater science with regard to water resource tracing to aid the JWRA in developing methods and sound scientific practices for conducting water investigations. WKU staff and graduate students also participated in hosting these workshops, gaining an international experience in water resources research and outreach. [Click here](#) for full article.

WKU graduate student continues water literacy project in Africa

During July 2014, WKU Center for Water Resource Studies staff member and Department of Geography and Geology graduate student Jonathan (Joneo) Oglesby made his way back to Niger, West Africa, to continue his thesis research among the Songhai people. This trip marked Oglesby's fifth to the region and focused on the use of eye-tracking in the evaluation of image-



driven water education, which utilizes cultural- and gender-appropriate images designed to foster visual storytelling. [Click here](#) for full WKU News article.

WKU faculty member receives grant to support research in East Africa

Dr. Nahid Gani has been awarded the prestigious and nationally competitive American Chemical Society-Petroleum Research Fund (ACS-PRF) Grant to support her research in East Africa.

Dr. Gani's study will investigate the timing of major reservoir rock formation through documenting the incision of the plateau, which has direct importance for hydrocarbon reservoir development. The timing of erosion is critical in understanding the probability of forming a reservoir basin as opposed to forming an organic-rich rock development. The formation of sediment, which is being studied in northeastern Africa, will help scientists unravel the development of the earth's crust and help explain climate evolution of the region. [Click here](#) for full WKU News article.

Josh Durkee Featured in BG Daily News

Talk of the Town

Dr. Josh Durkee is an associate professor of meteorology and climate science at WKU. In addition to his classroom courses, he has a field course in weather analysis and forecasting in the Great Plains, where the class forecasts and documents severe and often tornadic storms. Last August he was featured in the BG Daily News Talk of The Town Segment. For full BG Daily News article, [click here](#).



Dr. Aaron Celestian interviewed by the ACS Petroleum Research Fund

Dr. Aaron Celestian was interviewed by the American Chemical Society's Petroleum Research Fund last spring pertaining to the work he is conducting for an ACS grant. [Click here](#) to see full article in the Annual Report of the ACS PRF.

Dr. David Keeling visits London

University Distinguished Professor of Geography Dr. David Keeling visited London, England, last August to attend the annual meeting of the Royal Geographical Society and to participate in the annual board meeting of editors of the Journal of Transport Geography. For WKU News article [click here](#).

Physics & Astronomy



Students at the Hardin Planetarium's summer camp, "Chinese Discoveries That Shaped Our World," cooperate in the assembly of a wind chime. The campers decorated the clapper of their wind chime with calligraphy instructions learned at the WKU Confucius Institute. At the planetarium, campers learned about the musical scales and constructed their pentatonic wind chimes.

HARDIN PLANETARIUM COLLABORATES WITH CONFUCIUS INSTITUTE THIS SUMMER

In July Hardin Planetarium collaborated with the WKU Confucius Institute for a week-long, full-day summer camp, "Chinese Discoveries That Shaped Our World." This first-time collaboration provided wonderful new experiences for everyone involved. Campers who attended this special edition of the Science Curiosity Investigation (SCI) Camp spent their morning at Helm Library with staff from the Confucius Institute, and after lunch came up the hill to the planetarium for the afternoon activities. The grade 3 – 6 students made their own paper at the planetarium, and with the Confucius Institute they learned Chinese calligraphy to personalized this paper. The templates for two different kites were decorated at the Confucius Institute, then assembled and tested at the planetarium. Science, technology, music, and art were blended throughout the week to bring the best of all the worlds to the campers.

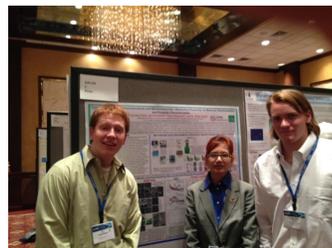
TC CHERRY VISITS WKU NOVA CENTER

Kindergarten students from T.C. Cherry Elementary School visited the WKU Nova Center on September 10th. The future scientists were very curious and asked lots of questions! Dr. Ed Kintzel, Director, (pictured at left) spoke to the students.



NEWS AND NOTES

American Conference on Neutron Scattering (ACNS) in Knoxville, TN on 6/1–6/5, 2014. Pictured at right are Eli Heintzman, Dr. Sanju Gupta and Carson Price.



44th Student REACH Week at WKU. Pictured at left are Carson Price, Dr. Sanju Gupta, Mayme Van Meveren and Eli Heintzman. Carson Price, Freshman Physics Major, Honors College,

won the Poster Award.

The 2nd Nanosmat USA Conference at Rice University, Smalley Institute in Houston, TX during 5/19–5/23, 2014. Pictured at right are Dr. Sanju Gupta, Professor P. Ajayan and Sir Harry Kroto, Professor and Nobel Laureate in Chemistry. Dr. Gupta delivered an invited talk at the Conference.



STUDENT DEVELOPS E-BOLA APP

Armin Smailhodzic of Bowling Green began working on The Ebola Project app as part of his master's thesis in the Homeland Security program in WKU's Department of Physics and Astronomy. The smartphone app uses Twitter data to track the outbreak of the Ebola virus and could predict the spread.

"Surprisingly enough, we found there was a lot of information being shared on Twitter," said Smailhodzic, who received his bachelor's degree in physics from WKU in 2011. "People in the rural villages of West Africa may fear Western doctors, but people tweet." said Dr. Keith Andrew, head of WKU's Department of Physics and Astronomy and Smailhodzic's faculty mentor.

Smailhodzic, a native of Bosnia who speaks five languages, learned a sixth language – Javascript – to develop the app. [Click here](#) for full WKU News article.

Biology



NOTEWORTHY NEWS



Courtney Broyles won 1st Place in the Undergraduate Poster competition at the 2014 Annual Meeting of the International Association of Food Protection, August 3-6 in Indianapolis, IN. The poster was titled “Thermal Inactivation of Escherichia coli O157:H7 and Non-O157 Shiga Toxin Producing E. coli in Moisture Enhanced Non-intact

Beefs As Affected by Internal Temperature, Moisture Enhancing Rate and Resting Time By Double Pan-Broiling.” Courtney is pictured above with her mentor, Dr. Cangliang Shen.

PUBLICATIONS

The Collyer lab had one article published in the journal *Heredity*, “A method for analysis of phenotypic change for phenotypes described by high-dimensional data.” This article involved research supported by an RCAP Award to Michael Collyer and an NSF REU experience for David Sekora (a Gatton student) in the summer of 2012 in the Collyer lab. David Sekora is now at the University of Rochester, and a co-author on the article.

The Collyer lab also had a manuscript accepted for publication in the journal *Copeia*, “Habitat-morphotype association of Pecos pupfish (*Cyprinodon pecosensis*), in isolated habitat complexes.” This manuscript involved research supported by an RCAP Award to Michael Collyer. The RCAP Award supported research experiences for two Gatton students, Meghan Hall and Melissa Smith, during 2012-2013, who are also co-authors on the manuscript. Meghan and Melissa are now undergraduate students at WKU.

The students pictured in the photo above left are the 2014-2015 WKU BIOAMBASSADORS.

Front row: Cyrus Sadrinia, Taylor Billings, Storm Dutton
Back row: Katelyn Dotson, Corbin LeMieux

KBRIN funding allows WKU Biology Professors to offer Small Genome Discovery program across KY

The KBRIN-Small Genomes Program is designed to build on the experience that Drs. Rodney King and Claire Rinehart have gained as participants in the Howard Hughes Medical Institute Science Education Alliance-Phage Hunters Advancing Genomic and Evolutionary Science (HHMI SEA-PHAGES) program. KBRIN will provide financial support (over 5 years) to replicate this innovative research-based educational model across the state of Kentucky. King and Rinehart will train faculty at outreach institutions across the state each summer. The goals are to use bacteriophage discovery, characterization, and genomics as the basis for original research for undergraduate students as well as to contribute hundreds of novel genomic sequences to published genomic databases.

WKU professor participating in statewide NSF EPSCoR project

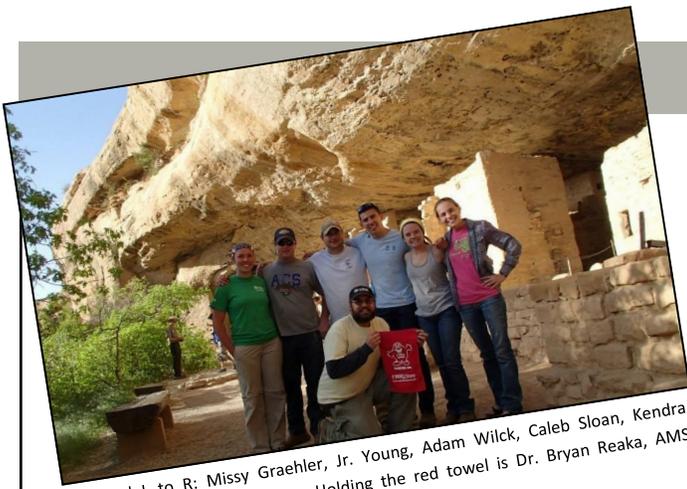
WKU biology professor Sigrid Jacobshagen will use her expertise in plant physiology and biochemistry as part of a \$24 million research effort called “Powering the Kentucky Bioeconomy for a Sustainable Future.” WKU’s portion of the award for Dr. Jacobshagen’s project is \$264,058 over the five-year period. Dr. Jacobshagen will address the improvement of biomaterials by looking at lignin, a product found in woody plants. [Click here](#) for the full WKU News article.

Potter Gray Science Day

Drs. Kerrie McDaniel (right), Michael Smith (below left) and grad student Jenni Dumaine (below right) talk to students at Potter Gray Elementary during their Science Day. Not pictured but attending were Drs. Nancy Rice, Keith Phillips and Noah Ashley.



Architectural & Manufacturing Sciences



Pictured L to R: Missy Graehler, Jr. Young, Adam Wilck, Caleb Sloan, Kendra Whitaker and Kateri Rhodes. Holding the red towel is Dr. Bryan Reaka, AMS Professor and Habitat For Humanity Faculty Advisor.

WKU HABITAT FOR HUMANITY HARD AT WORK

The WKU Chapter of Habitat for Humanity has several upcoming collegiate trips in the works.

For WKU's Fall break, students are headed to West Liberty, KY on a build trip. They are continuing to help families that were affected by the tornado of 2012. There are also students attending the Youth Leadership Conference in November in Charlotte, North Carolina. There, they will be learning how to become a better leader and bringing back information from other collegiate chapters to help better the WKU campus chapter. In December, several students are heading outside of Houston, Texas on another build trip. There are also two upcoming trips in January over WKU's Winter Break.

We are happy to report the bridge was successfully completed at Durbin Estates subdivision in cooperation with Warren County Habitat for Humanity as well as the Office of Sustainability at WKU. The bridge, pictured below, links the educational pond that has been built into the landscape with the entrance walkway for the subdivision.



Last May, five students and faculty Advisor Bryan Reaka (pictured above left) traveled to Durango, Colorado to assist the LaPlata County Habitat for Humanity Affiliate with framing a home for a partner family there. Every May the Habitat for Humanity WKU Campus Chapter has taken a trip to a far off location to experience the culture and the building methods in different parts of the US or the world. While in Durango, the students and faculty had the opportunity to venture out and visit the Rockies.

MEMORIAL FOR 9/11 DEDICATED AT RVFD

On the 13th anniversary of 9/11 a memorial was dedicated at the Richlandville, KY Volunteer Fire Department for the 343 fallen firefighters who lost their lives serving our fellow citizens that infamous day in New York. The memorial contains a four foot section of a steel beam recovered from the debris of that tragic morning. Richlandville fire chief, Joe Harbin, worked for two years to obtain this relic from the NY Port Authority. It was the distinct privilege of the WKU Architecture Resource Center director Neal Downing, AIA and his students who collaborated to produce the design as well as the construction documents for its realization. The upright column stands to remind us that out of that day's darkness, the light of the American spirit, exemplified by those 343 men and women, still shines. We will always remember. [Click here](#) for the full article in the BG Daily News.



Chemistry



Paige Huzyak, Celia Whelan and Tulsi Modi

NEWS AND NOTES

Chemistry students presented at the 248th American Chemical Society National Meeting in San Francisco, CA. Pictured above are Paige Huzyak (research mentor Hemali Rathnayake), Celia Whelan (research mentor Kevin Williams), and Tulsi Modi (research mentor Raja Dakshinamurthy).

All Chemistry Graduate students attended day long orientation and gained hands on experience with several pieces of safety equipment including fire extinguishers by university fire marshal Bob Austin (at right).



Dr. Donald Slocum is presenting a seminar titled "Expanding the Horizons of Aryl-lithium Chemistry" to the Department of Pharmaceutical Chemistry at the University of Kentucky in October. He is discussing potential pharmaceutical applications of his synthetic procedures.

Thirty-two students, undergraduate and graduate, will present posters or give talks at the Southeast Regional Meeting of the American Chemical Society in Nashville, TN this October. This is the largest regional meeting of the ACS and Dr. Stuart Burris will serve as General Chair.

NASA EPSCOR GRANT FUNDED

The University of Louisville, WKU, and the University of Kentucky received three-year support from NASA EPSCoR to conduct NASA's Advanced Colloids Experiment (ACE) in the International Space Station (ISS). This award has a \$750,000 contribution from NASA with \$300,000 additional matching funds from Kentucky EPSCoR.

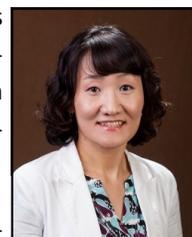
The scientific team of Stuart Williams from U of L, Gerold Willing from U of L, and Hemali Rathnayake from WKU will perform unique fundamental physical investigations of colloidal interactions called "haloing effect" under microgravity and will work with ACE researchers from NASA Glenn Research Center.

Co-investigator, Dr. Rathnayake (pictured at right), with the expertise in nanoparticle synthesis will develop different dye functionalized nanoparticles and microparticles for the colloidal experiments in ISS. In parallel, Dr. Williams (principal investigator) and Dr. Willing (co-investigator) will investigate electrokinetics and thermodynamic behavior of these colloids. The first flight for their microgravity experiments in the ISS has already scheduled to launch in August 2015.



DR. MOON SOO KIM GIVES SEMINARS IN KOREA

Dr. Moon Soo Kim traveled to Korea this summer and gave two seminars at universities in Korea: Ewha Womans University in Seoul, Korea and Kangwon National University in Chuncheon, Korea.



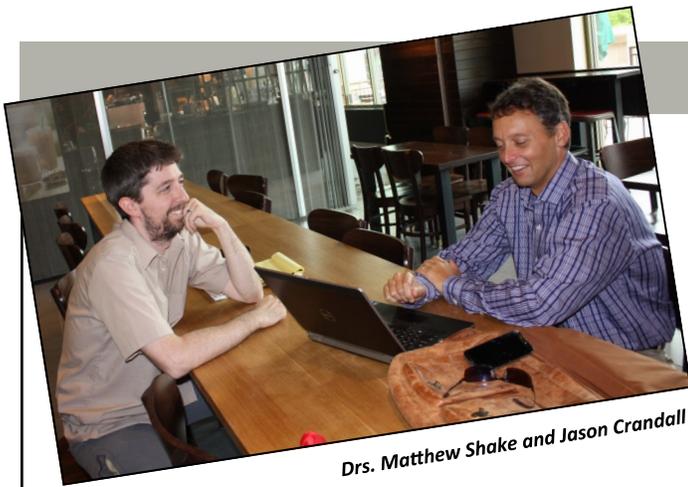
These universities are PhD granting institutions with good medical schools. Ewha Womans University is highly ranked in Korea with advanced research activities and cutting edge research facilities in all bio-related areas (biology/chemistry/pharmacy/food science). Kangwon National University is highly ranked in veterinary medicine.

Her talks were titled, "Engineering and application of DNA-binding proteins for detection of food borne pathogens" and "Pathogen-specific DNA detection utilizing custom DNA-binding proteins."

While in Korea, Dr. Kim also attended the conference for the Korean Society of Microbiology and Biotechnology.



Psychological Sciences



Drs. Matthew Shake and Jason Crandall

Professors Collaborating on a Unique Effort Benefiting Older Adults

Bingocize is a unique program that seeks to maintain or improve older adults' health and function. Millions of people (especially older adults) play the game of Bingo, and it is widely popular at places like assisted living homes, nursing homes, and other geriatric facilities. Drs. Matthew Shake (Psychological Sciences) and Jason Crandall (Kinesiology, Recreation and Sport) recently received two different grants from the state of Kentucky's Science and Engineering Foundation. The money (about \$75,000) is being used over the next year to develop a digital "app" version of Bingocize which can then easily be marketed to people all over the world via computers and tablets. The effort is interdisciplinary and also includes Dr. Guangming Xing from Computer Science.

Dr. Aaron Wichman Collecting Data For Many Labs 2 Replication Project

Dr. Aaron Wichman started data collection for Many Labs 2, a replication movement in social psychology that is forming the basis for similar movements in other fields. The Many Labs Replication Project is an international consortium of psychological scientists addressing concerns about failures to replicate classic findings in the field. The latest iteration of the project includes more than 100 independent investigators examining the replicability of findings and the size of effects that are both classic and novel. Many Labs 1 has received widespread attention and was covered in Nature, Science, National Geographic, and other secondary sources. Click [here](#) to view the final report.

Dr. Shoenfelt Guest Speaker At Missouri University of Science & Technology

Dr. Betsy Shoenfelt was an invited speaker for the grand opening of the Industrial-Organizational Psychology Graduate Pro-

gram at Missouri University of Science and Technology in Rolla, MO. Dr. Shoenfelt presented an assessment that she and her graduate students conducted with Army ROTC cadets. They identified the expertise that is needed to earn an excellent rating in the Leader Development and Assessment Course, then developed and delivered a training program to teach the cadets the interpersonal and mental skills which lead to success.



Dr. Betsy Shoenfelt

Psych Sciences Now Offers J.U.M.P.

The Department of Psychological Sciences now offers a Joint Undergraduate-Masters Program (JUMP) for highly qualified students. WKU is the only university in the state of Kentucky offering an accelerated program in the discipline of psychology. In this five-year course of study, students will earn a Bachelor of Science in Psychological Sciences and a Master of Science in Psychology. Interested students apply to the program before they have completed 65 hours of undergraduate credit. Please [click here](#) for more information.

Dr. Lickenbrock Presents at Biennial International Conference on Infant Studies

In July, Dr. Diane Lickenbrock and Psychology graduate student Victoria Greenwell presented, "*Parent and infant affect synchrony during early infancy: A longitudinal perspective*" at the Biennial International Conference on Infant Studies in Berlin, Germany. Dr. Lickenbrock uses longitudinal designs and multiple methods (e.g., experimenter-report, parent-report, physiological methods, observational coding, etc.) to examine the development of emotion and its regulation as well as individual differences in child temperament.

