The Biology Department is now on Facebook. To receive information about recent news and events click here and “like” us.

- Congratulations to Dr. Stone and also Dr. Aruscavage for being tenured and promoted to Associate Professor.
- Congratulations to Dr. Stone and his wife Dena on the arrival of their daughter Violet.
- Congratulations to Dr. Aruscavage and his wife Pam on the arrival of their son Braydon.

Greetings and welcome to the fourth edition of The Leaflet!!! As usual, we have a lot of news to share. We have two new tenure-track faculty members in the Biology Department, Dr. Alex Hernandez and Dr. Kaoutar El Mounadi. Dr. Alex Hernandez, a parasitologist, received his PhD in Ecology & Evolution from Rutgers University, New Brunswick and. Dr. Kaoutar El Mounadi, a plant pathologist, received her PhD from Southern Illinois University at Carbondale. Welcome to our new tenure-track faculty members who, among other things, are reviving some courses that have not been taught in recent years, including Medical Parasitology and Plant Pathology!!

The Department’s lab facilities have recently undergone additional renovations that have resulted in improvements to faculty/student research spaces and have also resulted in a renovated lab for a new Human Biology course for non-majors and space for Anatomy & Physiology I and II courses that are now being offered on campus.

Several faculty members and students have recently received awards or major grants! Congratulations to Dr. Todd Underwood who was the recipient of the 2015 Chambliss Faculty Award and to Dr. Chris Sacchi who was awarded the first annual College of LAS Dean’s Faculty Award! Congratulations to students David Grow who was recently awarded a Gold Chambliss Medal, and Lisamarie Feliciano and Wesley Hartman who were awarded Copper Chambliss Medals! Congratulations to Dr. Greg Setliff who was awarded two USDA-APHIS Farm Bill Grants to support student research on the spotted lanternfly, and to Dr. Robyn Underwood who was awarded a grant from the Northeast IPM Center to study honey bee colony health! Additional student award recipients are acknowledged later in the newsletter and also deserve congratulations!

Finally a big thank you to Dr. Chris Habeck who organized the Mid-Atlantic Chapter of the Ecological Society of America’s annual conference at KU on April 8-10, 2016. The conference was a huge success with 214 participants including many KU students, faculty, and some alumni.

We would very much like to hear from you and would be happy to include your news in The Leaflet! Keep in touch and best wishes!!!

Carol C. Mapes, Chair of the Biology Department
Global Brigades Chapter at KU

During the last two winter breaks a group of Kutztown University students traveled to Central America as part of a Global Medical Brigade. Global Brigades is an international nonprofit organization that focuses on providing impoverished areas with the foundation necessary to improve their communities. On these trips, KU student volunteers set up and ran medical clinics to provide medical care for underserved communities. This unique experience provided KU students with the opportunity to gain hands on experience in the medical field, as well as gain insight on different cultures. The KU chapter of Global Brigades has been extremely successful in their fundraising efforts, bringing in a total of $103,715 between the 2015 and 2016 medical brigades.

A Gold and two Copper 2016 Chambliss Academic Achievement Awards for Biology students

David Grow (on the left), an Environmental Science/Biology major senior received the 2016 Gold Chambliss Medal in the category of successfully completed research projects. Lisa Maria Feliciano (in the middle), received the 2016 Copper Chambliss Medal in the categories of successfully completed research projects and outstanding service to the Kutztown community. Wesley Hartmann (on the right) received the 2016 Copper Chambliss Medal in the category of noteworthy achievements in athletics.

Dr. Todd Underwood is the 2015 Chambliss Award winner

Dr. Todd Underwood was the recipient of the 2015 Chambliss Faculty Research Award and delivered the Chambliss Faculty Research Lecture during April 2015 on "How to avoid raising another bird's chicks: Behavioral defenses against brood parasitism." Dr. Underwood was recognized because of his extraordinary commitment to research in ornithology, his impressive record of publication and professional presentations in the field of ornithology, and his continuous striving to maximize opportunities for student participation in his research by dedicating much time promoting the presentation and publication of
students’ research. He was also recognized for his commitment to environmental causes as he actively uses his background in ecology as a member and officer of the Borough of Kutztown's Environmental Advisory Commission. In this role, he has helped in the maintenance of the Sacony Creek Trail and in planning the use and study of the Borough's newly designated North Park.

**Dr. Christopher Sacchi receives the first annual College of Liberal Arts and Sciences Dean’s Faculty Awards**

In Spring 2015, Dr. Christopher Sacchi was the recipient of the first CLAS Dean’s Faculty Award, a newly established award that recognizes a faculty member of the College of Liberal Arts and Sciences who is heavily invested in furthering the education of students at Kutztown University beyond the classroom. Dr. Sacchi was honored for being an outstanding faculty member at KU with a strong, positive influence on numerous students and faculty, and he was recognized for his tremendous efforts and impact on students and the college as a whole. Dr. Sacchi was honored for the dedication he has shown to students and his teaching throughout his seventeen-year career at KU. He has obtained three NSF grants to support teaching and provide scholarships, academic enrichment and support for students in the Biology department and Environmental Science Program. He has also regularly supervised students conducting independent research projects and off-campus internships.

**Major federal research grants awarded to Biology faculty**

Dr. Gregory Setliff was awarded two federal grants to support his research on the spotted lanternfly, an invasive insect pest that was first detected in Berks County, PA in 2014. The two USDA-APHIS Farm Bill Grants support four undergraduate student projects investigating the insect’s impact on native Pennsylvania flora. During the first year of the study, Kutztown undergraduates Cathryn Pugh and Evan Williams confirmed that the spotted lanternfly attacks more than thirty tree species in Pennsylvania. They were also able to assess the efficacy of the currently approved trapping method and elucidate some of the insect’s natural history. Dr. Setliff is currently an advisor to the USDA Technical Working Group on the Spotted Lanternfly. In July 2015, Dr. Setliff’s research team was recognized by PA State Senator Judy Swank and Secretary of Agriculture Russell Redding at a press conference held in Berks County, PA. At the conference, Kutztown University was thanked for contributing to the Spotted Lanternfly Eradication and Management plan.
Dr. Robyn Underwood was awarded a $45,870 grant from the Northeast IPM Center, which is funded by the USDA. Her study, entitled Using Organic Methods and Restricting Brood Nest Size to Improve Honey Bee Colony Health and Control Varroa Mites, is a side-by-side comparison of honey bee colonies kept using organic and conventional management practices to quantify whether management philosophy significantly impacts honey bee health. Beekeepers may be able to reduce environmental stressors by altering their beekeeping practices for the good of the bees. This project is a collaboration with scientists at the University of Maryland, Penn State Schuylkill, and the Rodale Institute.

**Recent Publications in the Department (**indicates former KU student)**


*Kemfort J.R. and Towne W.F. 2013. Honey bees can learn the relationship between the solar ephemeris and a


**Annual Student Awards:**

The Biology Department recognized the following students for their exemplary service, research, and/or academic achievement during the 2014, 2015 and 2016 academic years:

**2014:**

- **CPUB Award:** E. Justin Warren
- **Ronald Rhein Scholarship:** Ryan E. Kohn
- **Cyrus E. Beekey Award:** Alexa L. Sicher
- **Sam Gundy Early Achievement Awards:** Connor Gable
- **Joshua W. Wesner Scholarship:** Brianna Launcing
- **Dept. of Biology Academic Excellence Awards:** Claire E. Brookens, Ty M. Frank, Ryan E. Geisler, Alexa L. Sicher

**2015:**

- **CPUB Award:** Duncan Brown
- **Ronald Rhein Scholarship:** Stormie R. Wagner
- **Cyrus E. Beekey Award:** Ryan E. Kohn
- **Sam Gundy Early Achievement Awards:** Antoinette E. Ritrovato
- **Joshua W. Wesner Scholarship:** Alisha M. Fox
- **Dept. of Biology Academic Excellence Awards:** Ezry St. Iago-McRae, Patrick Schukraft, Stormie R. Wagner, Ryan E. Kohn, Nathan E. Geissinger

- **Outstanding Student in Environmental Science/Biology:** Hannah Failey
Outstanding Student in Marine Science/Biology: Elizabeth A. Fromuth
Outstanding Student in Biology/Pre-Med: Nathan E. Geissinger
Outstanding Student in Biology/Organismal/Ecology: Christina A.M. Harry
Outstanding Student in Biology/Cell/Molecular/Microbiology: Ryan E. Kohn

2016:

CPUB Award: David A. Grow
Ronald Rhein Scholarship: Chelsea Johnson
Cyrus E. Beekey Award: Connor Gable
Sam Gundy Early Achievement Awards: Michael Toolan, Kyle N. Leiser

Joshua W. Wesner Scholarship: Alyssa M. Ryan
Dept. of Biology Academic Excellence Awards: Andri J. Cruz, David A. Grow, Connor Gable, Wesley L. Hartmann, William Okoniewski

Outstanding Student in Environmental Science/Biology: David A. Grow
Outstanding Student in Biology/Pre-Med: Andri J. Cruz
Outstanding Student in Biology/Organismal/Ecology: Connor Gable
Outstanding Student in Biology/Cell/Molecular/Microbiology: John J. Hovanec

Additional Students Awards

Cathryn Pugh and Evan Williams won the first place in the President’s Prize student poster competition at the Annual Meeting of the Entomological Society of America in November 2015 in Minneapolis, MN. They presented the research they have been conducting with Dr. Greg Setliff on the host range of the new invasive spotted lanternfly (*Lycorma delicatula*) in southeastern Pennsylvania.

Duncan Brown received the 2014 Outstanding Student Entomologist Award by the Entomological Society of Pennsylvania at the society's annual meeting. Duncan gave a presentation at the meeting on the research that he has been conducting with Dr. Carol Mapes on cynipid and cecidomyiid gall formers of Pennsylvania. Duncan has also conducted research with Dr. Greg Setliff and with Dr. William Towne. This was a special honor for Duncan as the award is usually reserved for graduate students!
New Faces in the Department

Dr. Alex Hernandez

We are happy to welcome Dr. Alexander Hernandez a tenure-track faculty member who joined the Biology Department in Fall 2014.

Dr. Hernandez completed his BA in Biology and PhD in Ecology & Evolution from Rutgers University, New Brunswick where he developed an interest in parasites and diseases. Between completing his BA and PhD he received an MS degree in Zoology and Ecology & Evolution from Michigan State University, where he began to study the life cycle of parasites in wild fishes from Michigan streams. After completing his PhD he was a Visiting Research Scientist at Florida International University’s Southeast Environmental Research Center. He later became a Japan Society for the Promotion of Science Fellow at Kyoto University’s Primate Research Institute, and then became a Postdoctoral Researcher at Penn State University. Before arriving at KU he was a Lecturer at Rutgers University – New Brunswick.

Dr. Hernandez studies the biology of parasites in wildlife, and focuses on helminthes (worms) that parasitize fish and invertebrates in streams. He’s currently developing a study of parasites infecting fish communities from tributary streams of the Maiden Creek Watershed in Pennsylvania. He aims to describe the diversity of parasites in different fish species living in these streams and to understand how parasites successfully transmit from fish to fish. Parasites commonly infect fish when fish consume the juvenile stages of parasites living in invertebrate prey. By studying the feeding interactions within a community’s food web, Dr. Hernandez and his students will explore how inclusion of parasites in food webs alters community structure and stability, as well as how parasites can be used as biological indicators of environmental health.

Dr. Kaoutar El Mounadi

We are equally happy to welcome Dr. El Mounadi, our most recent, tenure-track hire. Dr. El Mounadi is a plant pathologist by training. She joined us in Fall 2015. Dr. El Mounadi completed her BS in Biology in Morocco and her MS in Microbiology from the University of Seville in Spain. She then received her PhD in Agricultural Sciences from Southern Illinois University at Carbondale where she studied the different aspects of the biosynthesis of toxins by pathogenic fungi. Dr. El Mounadi then joined the Donald Danforth Plant Science Center, a nonprofit institute that focuses on plant science research as a postdoctoral research associate and began work studying the molecular mechanisms by which plant defensins inhibit the growth of plant fungal pathogens.

At KU, Dr. El Mounadi’s research interests are in the areas of plant pathology and fungal cellular and molecular biology. Her research work aims at designing safe and durable strategies to increase resistance of plants to fungal diseases. She has taught principles of Biology, Botany and Introductory Biology and will be teaching an introductory course in Plant Pathology which will be offered in Fall 2016 for
the first time since Dr. Frank Muzopappa retired in the 1990’s. Dr. El Mounadi is very committed to undergraduate research and has recruited students to work with her on a research project that has recently been funded by KU’s Research Committee.

**Student Spotlight:**

**David Grow**

David Grow is a senior majoring in Environmental Science/Biology and will be graduating in May 2016. David is the recipient of the Gold Chambliss Academic Achievement Award given to two students each year for excellence in research, academic achievement, and for service to the University. David’s experience as a researcher is exceptional. Since his freshman year, David has participated in research projects under the mentorship of Biology professor and conservation biologist Dr. Chris Habeck. In the summer following his freshman year, David assisted Dr. Habeck in setting up an important long-term research project on the effects of invasive Japanese stilt grass and mammalian herbivores on the development of plant communities. Following his sophomore year, David walked the entire length of the PA portion of the Appalachian Trail, systematically sampling the presence and abundance of exotic species along the trail. David presented the results of this research project at the 100th Annual Meeting of the Ecological Society of America, and with further analysis presented additional information about this research at regional meetings. Dr. Habeck and David plan to publish the results of this research in a peer-reviewed journal. During the summer following his Junior year David worked as a field assistant on a project evaluating the influence of climate change on plant communities near Mount Rainier in Washington. David is deserving of recognition for his diverse experiences in research, his excellence as a student, having earned Dean’s list honors for seven consecutive semesters, and for his many contributions to others through his efforts in service as a Biology Peer Mentor, President of the Outdoors Club, in teaching a Plant Science Merit Badge activity for Boy Scouts, and more. David has also earned recognition as a four year National Science Foundation STEM Scholarship award recipient and a KU Promise Scholarship recipient during his time at KU. The Biology faculty agree that David was an excellent choice to receive recognition as a Gold Medal Chambliss Academic Achievement Award recipient. David believes that KU faculty members have played a major role in his academic success, he says that “KU has faculty members who genuinely care for their students’ success, inspire them to develop their passion, and challenge them to be the best students possible”. David will start a Master’s program at Towson State University this fall and plans to study the urban ecology of invasive plant species.
Alumna Spotlight:

Stormie Wagner ('15)

Stormie Wagner is a native of Leesport, PA and transferred into B.S. Biology: Premed program at Kutztown University in Fall 2012 from Reading Area Community College. While at KU, she quickly distinguished herself through her commitment to academics, research, and service.

The most notable of Stormie’s many achievements was her selfless and relentless dedication to her peers, her University, and her community. At KU Stormie served as a peer mentor for the Biology Mentoring Program, as President of the Women in Science Club, and co-President of the KU Global Brigade Chapter (see page 2 of leaflet). Additionally, Stormie was a volunteer for the Central Eastern Regional Science Olympiad, Kutztown Area Girl Scout Troop, Miller Keystone Blood Bank, Lehigh Valley Health Network, and her high school Cheerleading Association. Moreover, throughout much of her education at KU Stormie worked part-time as a Personal Care Assistant for Rittenhouse Senior Living of Reading, PA. In recognition of her unparalleled work ethic and outstanding commitment to the Department, Stormie was awarded with the Ronald Rhein Scholarship in 2015.

In 2014-2015, Stormie worked with her research advisor, Dr. Dan Aruscavage, to investigate bacterial contamination of bagged spinach leaves. She presented her findings at the 2015 annual meeting of the Commonwealth of Pennsylvania University Biologists, where her Poster Presentation was awarded 1st place in the undergraduate student competition. In addition to all of the above, Stormie managed to find time to gain meaningful clinical shadowing experience under a D.O. in the Fleetwood area.

Stormie graduated from Kutztown in December 2015 with a 3.87 GPA and is transitioning into the Doctor of Osteopathic Medicine Class of 2020 at the Philadelphia College of Osteopathic Medicine.

Kutztown University hosts the annual meeting of MA-Ecological Society of America

Dr. Chris Habeck organized and ran the Mid-Atlantic Chapter of the Ecological Society of America’s annual scientific conference that was held in the Boehm Science Center, April 8th – 10th, 2016. The conference was attended by 214 professors, students, and professional ecologists from throughout the mid-Atlantic region and surrounding states. The conference was a great opportunity for Kutztown University Biology and Environmental Science students to highlight their research activities and passion for science. Twenty one Kutztown University students and alumni were authors on 15 scientific presentations at the conference, and 10 faculty from Biology and Geography were secondary authors and/or mentors of the research associated with these presentations. The organization and implementation of the conference was no small feat, but with the help of a large group of engaged and motivated students, faculty and staff, the conference was a great success! The highlight of the conference for many was the Special Topics address by Biology alumnus, Dan Kunkle, who
discussed restoration work that he and other members of the Lehigh Gap Nature Center are conducting near the location of the Palmerton Zinc Smelter superfund site. The Biology Department appreciates all of the time and effort that Dr. Habeck put into making this meeting a success and also appreciates the generous support of Acting Dean David Beougher and Acting Provost Zayaitz. The Biology Department also appreciates the support of students, faculty, and staff who volunteered their time and resources to this event and in particular the efforts of David Grow (Environmental Science/Biology ’16) and members of the KU Outdoors Club who provided invaluable assistance setting up the conference and operating the registration desk.

Dr. Chris Habeck, KU Biology faculty and chair of the Mid-Atlantic Chapter of the Ecological Society of America’s 2016 Meeting

Many thanks to all the KU Biology students who helped tremendously in organizing the ESA-MA 2016 Meeting

Emily Coghlan was one of the many KU students who presented at the ESA-MA 2016 Meeting. She is pictured with her research advisor Dr. Chris Sacchi.
KU Biology faculty and students attended the 46th Annual Meeting of the Commonwealth of Pennsylvania Biologists at Indiana University of Pennsylvania on April 11, 2015. From left to right: Duncan Brown, Ewa Makowka, Dr. Aruscavage, Fikir Wordofa, Dr. Towne, Stormie Wagner, Dr. Underwood, Lisamarie Feliciano, Dr. Mapes, Nathaniel Mull, Dr. Baguinon, and Samantha Asher. Congratulations to Dr. Aruscavage’s research students, Ewa Makowka and Stormie Wagner who received first place in a cell/microbiology poster session! Kudos to all the student presenters and special congratulations to Duncan Brown who was honored as the KU CPUB Outstanding Student!

KU Biology faculty and students attended the 47th Annual Meeting of the Commonwealth of Pennsylvania University Biologists at Millersville University on April 16, 2016. From left to right: Dr. Towne, Antonina Esposto, David Grow, Christie Ellis, Dr. Baguinon, and Alyssa Boswell. Dr. Aruscavage attended as well. Kudos to all the student presenters and special congratulations to David Grow who was honored as the KU CPUB Outstanding Student!
Support Excellence in the Biology Department

We are seeking support for the Biology Department’s undergraduate research fund. This program provides direct financial support for undergraduate research projects in the department. This program is critical to the success of our students by providing our high-caliber students with valuable research experiences. If you would like to provide a donation to support this program, mail your donation to the Kutztown University Foundation at the address provided below. **Checks should be made out to the KU Foundation.** To specify this particular fund, include the coupon (below) with your payment.

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If you have a contribution for *The Leaflet* or if you have any questions or comments about its content please send them directly to Dr. El Mounadi (elmounadi@kutztown.edu)