

# BioUCA

*Promoting, enhancing and contributing to the science of biology*



IN THIS ISSUE

---

**STUDENT SPOTLIGHT**

---

**FEATURED RSO**

---

**CNSM AMBASSADORS**

---

**SENIOR HIGHLIGHTS**

---

**AND MUCH MORE!**

## Mission Statement

The mission of the UCA Biology Department is to promote, enhance, and contribute to the science of biology by offering undergraduate and graduate degree programs, engaging in biological research and actively assisting the individuals and organizations in our community. The biology program also contributes to the education of all UCA students through its general education biology course and plays a significant role in supporting the curriculum for programs in the College of Health and Behavioral Sciences.

# A MESSAGE FROM OUR CHAIR



Bailey Sutliff, senior

Welcome to the second issue of BioUCA!

I invited one of our seniors, Bailey Sutliff, to help with this newsletter. Bailey is a senior who has been active as a CNSM Ambassador and is President of the Pre-med Club.

We started the Fall 2018 semester with a "full house." There were 727 Biology majors and 88 Environmental Science majors (on the Biology track) for a total of 815 undergraduate students walking the hallways of Lewis Science Center and Conway Corporation for the Sciences.

This academic year has been busy with students involved in the Departmental clubs, presenting research at meetings, getting hands-on learning opportunities in their biology courses, and getting dirty in the Jewel Moore Nature Reserve. In May, we will be hosting 460 middle schoolers at our STEM Day in the Farris Center! Seeing the success of our students continually reminds me why I enjoy being a teacher and mentor to these aspiring biologists.

I appreciate all the alumni emailing me to reconnect with our Department after the first edition of the newsletter. STAY CONNECTED. Also, thank you for participating in the UCA Day of Giving on March 7, 2019. Your support is appreciated and needed to help our students succeed.

Go Biology Bears!

# Student Spotlight

## Undergraduate students \*

- Randy Rainwater (mentor: Dr. Arijit Mukherjee): awarded a Student Undergraduate Research Fellowship from the Arkansas Dept of Higher Education.
- Randy Rainwater was awarded a summer (2019) research internship at Johns Hopkins University.
- E. Chernivec\*, J. Cooper\*, and K. Naylor. Exploring the effect of rotenone – a known inducer of Parkinson's disease – on mitochondria dynamics in *Dictyostelium discoideum*. *Cells* 7(11), 201, 2018.
- Chandani Patel, junior pre-dentistry, established and is leading the dental outreach chapter to Jarabacoa, Dominican Republic in May 2019. They will assist local dentists in providing dental care. Seven students will be going.

## Graduate students\*

- Bri Trejo (mentor: Dr. David Dussourd & Dr. Matt Gifford): First place for Graduate Oral Presentation in Ecology and Organismal Biology division at the Arkansas Academy of Sciences.
- Bri Trejo (mentors: Dr. David Dussourd & Dr. Matt Gifford): First place in the Master's Student Division at the Arkansas Entomological Society for the presentation on the "Energetic cost of girdling in a notodontid caterpillar, *Oedemasia leptinoides*."
- Robinson, C.D.\* & M.E. Gifford. 2019. Intraseasonal plasticity of patch color in the prairie lizard (*Sceloporus consobrinus*). *Herpetologica* (in press).
- Robinson, C.D.\* & M.E. Gifford. 2018. Covariation between thermally mediated color and performance in a lizard. *Physiological and Biochemical Zoology*, 91:1013-1025.
- Burgad, A.\*, G. Adams, and S. R. Adams. Temporal and spatial dynamics of fish community structure during watershed alteration in two Ouachita River systems. *Ecology of Freshwater Fish*, 2019 (in press).

## Student Travel & Presentations at Meetings

- Southeastern Fishes Council meeting in South Carolina.
- Arkansas INBRE Symposium in Fayetteville, AR.
- Arkansas Academy of Sciences at Hendrix College.
- Entomological Society of America and Canadian Entomological Societies in Vancouver, Canada.
- Missouri Herpetological Society Meeting.
- Object Perception, Visual Attention, and Visual Memory Conference in New Orleans, Louisiana.
- J.B. Johnson Club for Evolutional Neuroscience in San Diego, CA.



# Featured RSO: Pre-med club



Membership is increasing (~200 students) in the AMSA UCA Pre-Med Club. Most of the Club members are Biology majors. This registered student organization is advised by Dr. Gomez-Kramer and lead by an executive board of seven upper class, pre-med students. The current executive board includes President- Bailey Sutliff, Vice President- Jonathon Sledge, Treasurer- Conrad Murphy, Secretary- Louie Crawford, Public Relations- Claire Brown, Fundraising Chair- McKenzie Morpew, and Volunteer Chair- Drew Castleberry.

The club focuses on preparing pre-med applicants by offering clinical or science-based volunteer opportunities within the community, networking/internship opportunities with medical professionals and university faculty, and an overall preparedness for the application process. This RSO is featured due to their hard work and dedication to the betterment of the pre-med population at UCA. Many UCA seniors have been accepted into medical schools across the nation for the year of 2019. The club hopes to work toward the continued success of pre-med students in future years.



# CNSM Ambassadors

The College of Natural Science and Mathematics (CNSM) Ambassadors are one of the most recent additions to the university alumni organizations. Analogous to the UCA Ambassador Program, this organization is completely tailored to the CNSM. It was started by recent alumna, Coral Byrns, in the fall of 2018. The CNSM Ambassadors have hit the ground running this year.



- Right: Jacie Cooper (president) and Left: Natalie Burklow (vice president)

This organization is sponsored by Ginny Adams and Aimee Poynter, along with student leaders Jacie Cooper (president) and Natalie Burklow (vice president). The job of the Ambassadors is to network with other students and alumni from CNSM. A variety of majors within the CNSM department are represented throughout the organization. Tours of the new building Conway Corporation Center for Sciences (CCCS) are popular among alumni. This gives students an opportunity to share experiences gained with the recent CCCS addition to the College. This organization allows students to build relationships with faculty and provide a familiar face for their fellow students on campus.

# Senior Student Highlights

Throughout the UCA biology department, there are many outstanding student leaders that have represented the department. I (Bailey Sutliff) had a chance to ask a couple of graduating seniors to reflect on their time at UCA and describe their successful experiences with the UCA biology department.

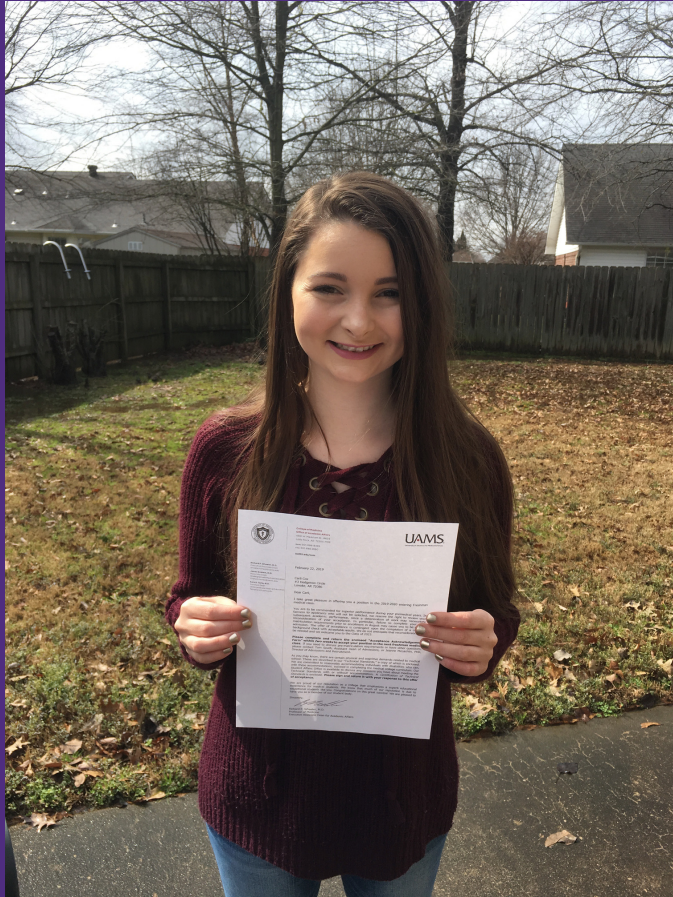


Josh Nilz, Senior Environmental Science/Biology track Major

Q: What has been your favorite experience within the biology department during your time at UCA?

A: "During my tenure at UCA, the Biology Department and Environmental Science Program has offered numerous experiences that have shaped me into the student I am today. It has been my honor to serve an officer position in the Biology Club for the past two years, and I hope the club continues to prosper with the up-and-coming scientists. Through the Jewel Moore Nature Reserve, I have gained hands-on experience with natural resource management techniques and best practices, including controlled burns of the long-grass prairie. In my coursework, I have gained the experience needed to compete in a global job market, and I have had the opportunity to study under leading scientists, like former faculty member, Dr. Sally Entrekin. The professors in the Environmental Science Program are always willing to go the extra mile to foster dedicated scholars, and working with them has been my favorite experience in the Biology Department at UCA."

# Senior Student Highlights



Yay, I am going to UAMS!

Check out my acceptance letter.

Carli Cox, Senior Biology Major (pre-med concentration)

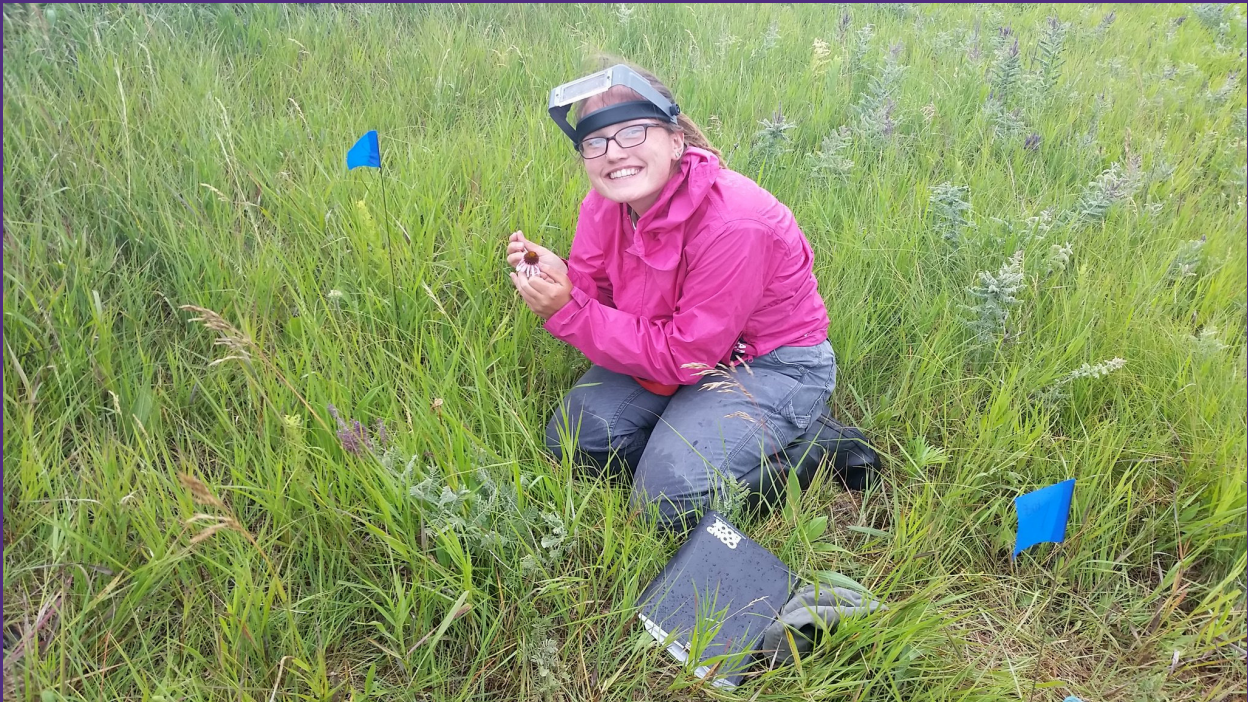
Q: In what ways did the UCA biology department help prepare you to take on medical school?

A: "The UCA Biology department gave me amazing mentors that supported me throughout the application process and gave me priceless advice. The lessons they taught me inside and outside of the classroom made it possible for me to become a competitive applicant and feel prepared to start medical school."

*Dept Chair's Note: To date, we have 27 students admitted to either medical or osteopathic school for Fall 2019.*



# Senior Student Highlights



Ashley Barto, Senior Environmental Science/Biology track Major

Q: If you had to tell an incoming UCA freshmen what you enjoyed most about being part of the biology department, what would you tell them?

A: "Biology faculty gave me unwavering encouragement to pursue my research interests and succeed in my classes. Their support made me the scientist I am today, and mentorship from understanding and uplifting faculty has been one of my favorite parts of being an environmental science student in the biology department."

# Alumni Spotlight



Matt Schroeder, BS in Environmental Science/Biology track & MS in Biology ('06), was awarded the Fisheries Biologist of the Year for the Arkansas Game & Fish Commission.

Matt Bell ('97), was named the Director of the University of Arkansas STEM Center for Mathematics and Science Education in August 2018.



## Alumni served as panelist for the UCA Women and Minorities in STEM Day on April 12th.



Austin Porter III ('05), Assistant Professor at the College of Public Health, Univ. of Arkansas for Medical Sciences and Deputy Chief Science Officer for the Arkansas Department of Health

Samantha Roberson ('11), Plant Pathologist at Walt Disney World





# New Faculty Spotlight



## **Dr. Erin Wiley** **Plant Ecophysiologicalist**

Dr. Wiley joined the Biology Department in Fall 2018 as an Assistant Professor. Dr. Wiley is originally from Michigan and got her B.S. in Biology from the University of Michigan. She got her Ph.D. from the Biology Department at the University of Pennsylvania, where she studied how trees allocate their resources following defoliation. Her research showed that oak trees grow less, stop reproducing, and put more carbon into storage after defoliation. This change in allocation allows trees to refill their storage pools, which help them cope with disturbances like defoliation. Dr. Wiley then moved to the University of Alberta (Edmonton, Alberta) where she worked for five years in the Department of Renewable Resources as a postdoctoral fellow. There, her research focused on understanding how trees die and the role that carbohydrate storage plays in helping trees cope with stress and avoid mortality. She looks forward to continue research on tree mortality and carbohydrate storage in trees here in Arkansas with students at UCA.





**UNIVERSITY OF CENTRAL ARKANSAS**

## Biology Seminar Series

**Fall 2018**

**INVITED SPEAKERS**

**Thomas Lowder PhD, CSCS**  
University of Central Arkansas  
Department of Exercise and Sport Science  
Friday September 14<sup>th</sup> Noon Room 172 LSC  
*Exercise Enhances Pulmonary Function of Bone Mineral Density in Women with Lymphangioleiomyomatosis (LAM)*

**Steve Foley PhD**  
Federal Food and Drug Administration  
Department of Health and Human Services  
Friday October 5<sup>th</sup> Noon Room 172 LSC  
TBD

**Shannon Rose, PhD**  
University of Arkansas for Medical Science  
Department of Pediatric Clinical Pharmacology  
Arkansas Children's Research Institute  
Friday November 9<sup>th</sup> Noon Room 172 LSC  
*Bioenergetic Profiling in Circulating Cells*

**Kari Naylor, PhD**  
University of Central Arkansas  
Department of Biology  
Friday November 16<sup>th</sup> Noon Room 172 LSC  
TBD

Brought to you by:  
University of Central Arkansas  
Biology Graduate Program  
For More Information Contact  
Mason Rostollan, Graduate Student  
Office 003A, mrostollan1@cub.uca.edu

# Departmental Seminars



Please contact me if you would like to be part of our seminar series. We love to invite UCA alumni back to talk with our students.

**UNIVERSITY OF CENTRAL ARKANSAS**

## Biology Seminar Series

**Spring 2019**

**INVITED SPEAKERS**

**Aquatic Ecologist Job Candidates**  
January-February, TBA  
*Schedule and locations to be announced*

**Women of STEM Day**  
UCA CNSM  
Friday February 15<sup>th</sup>  
*Speakers and schedule to be announced*

**Jerod Denton, PhD**  
Vanderbilt University  
Department of Anesthesiology  
Friday February 22<sup>nd</sup> Noon, Room 172 LSC  
*From UCA and back again: An unlikely journey as an academic scientist*

**Lori Neuman-Lee, PhD**  
Arkansas State University  
Department of Biological Sciences  
Friday March 1<sup>st</sup> Noon, Room 172 LSC  
*Endocrine and immune interactions in reptiles*

**Erin Wiley, PhD**  
University of Central Arkansas  
Department of Biology  
Friday March 15<sup>th</sup> Noon, Room 172 LSC  
*Carbon starvation in a carbon-rich world:  
The role of carbohydrate storage in tree mortality*

**David Dussourd, PhD**  
University of Central Arkansas  
Department of Biology  
Friday April 5<sup>th</sup> Noon, Room 172 LSC  
*Adventures in Wonderland: Cunning caterpillars vs. impregnable plants*

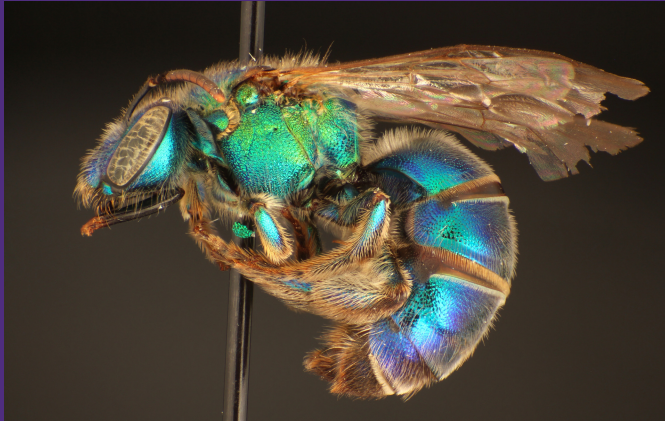
**Maureen "Mo" Donnelly, PhD**  
Florida International University  
Department of Biological Sciences  
Friday April 19<sup>th</sup> Noon, Room 172 LSC  
*To Be Announced*  
**Sponsored by UCA Fisheries and Wildlife Society!**

Brought to you by:  
University of Central Arkansas  
Biology Graduate Program  
For More Information Contact  
Mason Rostollan, Graduate Student  
Office 003A, mrostollan1@cub.uca.edu



# Winners of the 2018 Jewel Moore Nature Reserve photography contest

## Faculty/Staff/Alumni Division



1st place: Iridescent Bee  
Coleman Little (Department of Biology)



2nd place: Flowers Surrounded by Ring  
of Sumac Leaves  
Hayley Fugatt (School of Communication)

## Student Division



1st place: Mushrooms  
Stefani Hall (undergraduate Biology major)



2nd place: Shelf Fungus  
Jasper Reddin (undergraduate Computer  
Science major)