

MATTHEW E. GRILLIOT

CURRICULUM VITAE

ADDRESS

College of Arts and Sciences
Department of Biology
Auburn University Montgomery
Montgomery, AL 36117
Office: Goodwyn Hall 310T
Office Phone: (334) 244-3415
Cell Phone: (334) 750-2051
E-mail: mgrillio@aum.edu

EDUCATION

- 2007** Ph.D. Auburn University, Biological Sciences
Dissertation: "The Use of Ultrasound for Communication in Big Brown Bats, *Eptesicus fuscus*"
- 1998** B.S. Auburn University, Wildlife Science

ACADEMIC EMPLOYMENT

- Fall 2016-Present** Assistant Professor, Auburn University Montgomery, AL
- 2015-2016** Associate Professor, Troy University-Montgomery, AL
- Summer 2016** Adjunct Instructor, Auburn University Montgomery, AL
- 2010-2015** Assistant Professor, Troy University-Montgomery, AL
- 2007-2010** Lecturer. Troy University-Montgomery, AL
- 2002-2007** Graduate Teaching Assistant (Human Anatomy & Physiology)
Auburn University, AL

TEACHING

- Principles of Biology I - 1010 (Cells, Molecules, and Life)

- Principles of Biology I – 1010 (Developed, Piloted, and implemented CURE labs)
- Principles of Biology II Lab - 1021 (Organisms, Adaptations, and Environment)
- Biology 2100 (API)
- Biology 2101 (API lab)
- Biology 2110 (APII)
- Biology 2111 (APII lab)
- Vertebrate Physiology
- Mammalogy
- Wildlife Ecology: Management and Conservation (online)

SCHOLARSHIP AND CREATIVE ACTIVITIES

PEER-REVIEWED PUBLICATIONS

- Hunt, J.L., Grilliot, M.E., Best, T.L., Castillo, I.F., Eddington, P.E., Johnson, F.A, Kilgore, T.L., and Courson, J.H. Energy Content of Seeds of Palmer's Pigweed (*Amaranthus palmeri*) in the Diet of Scaled Quail (*Callipepla squamata*) in Southeastern New Mexico. **In Review**
- Hunt, J.L., Grilliot, M.E., Best, T.L., Lozano-Lopez, D., Neilson, E.R., and Castillo, I.F. Energy Content of Seeds of Common Sunflower (*Helianthus annuus*) from the Diet of Scaled Quail (*Callipepla squamata*) from Southeastern New Mexico. *Journal of the Arkansas Academy of Science*, 74: 2020.
- Hunt, J.L., Grilliot, M.E., Best, T.L., Deen, C.S., Lozano-Lopez, D., Neilson, E.R., and Schlegel-Ridgway, T.R. Energy Content of Seeds of Texas Doveweed (*Croton texensis*) from the Diet of Mourning Doves (*Zenaida macroura*) from Southeastern New Mexico. *Journal of the Arkansas Academy of Science*, 73: 18-20. 2019.
- Grilliot, M.E., Hunt, J. L., and Sims, C.G. Organochloride Pesticides Present in Animal Fur, Soil, and Streambed in an Agricultural Region of Southeastern Arkansas. *Journal of the Arkansas Academy of Science*, 72: 106-108. 2018.
- Grilliot, M.E., Burnett, S.C., and Mendonça, M.T. Choice experiments demonstrate that male big brown bats (*Eptesicus fuscus*) prefer echolocation calls of high copulatory females. *Acta Chiropterologica*, 17 (2): 411-417. 2015.
- Grilliot, M.E., Burnett, S.C., and Mendonça, M.T. Sex and seasonal differences in components of ultrasonic vocalizations in adult big brown bats (*Eptesicus fuscus*) and their relation to mating activity. *Acta Chiropterologica*, 16 (2): 379-386. 2014.
- Grilliot, M.E., Hunt, J. L., Sims, C.G, and Comer, C.E. New Host and Location Record for the

Bat Bug *Cimex adjunctus* Barber 1939, with a Summary of Previous Records. *Journal of the Arkansas Academy of Science*, 68: 149-151. 2014

Grilliot, M.E. and Harden, S. Investigating Optimal Foraging Theory in the Laboratory. *The American Biology Teacher*, 76 (6): 403-406. 2014.

Grilliot, M.E. and Harden, S. Using card games to simulate natural selection. *The American Biology Teacher*, 76 (2): 124-126. 2014. **(NABT Bioclub Recommendation)**

Grilliot, M.E., Burnett, S.C., and Mendonça, M.T. Sexual dimorphism in big brown bat (*Eptesicus fuscus*) ultrasonic vocalizations is context dependent. *Journal of Mammalogy*, 90 (1): 203-209, 2009.

EXTERNAL GRANTS SUBMITTED

2019 Research Grant in the amount of \$1500.00 awarded to continue work on “Surveys of Bat Diversity in Southeastern Arkansas” awarded by University of Arkansas—Monticello Faculty Research Committee.

2018 White-nose syndrome small grants program 2018-2019 (via Wildlife Management institute on behalf of the USFWS). Grants not to exceed \$25,000, requires non-federal match equal to or greater than 35% of amount requested. Submitted a proposal titled “ Investigating the effects of persistent organic pollutants (POPs) on immune system health and susceptibility of tricolored and southeastern bats to WNS. Total requested \$24, 928; Total Required \$34, 961. **NOT AWARDED**

2017 A small research grant was awarded (\$7200.00) through a collaborative project with faculty at the University of Arkansas-Monticello. Arkansas IDEa Network of Biomedical Research Excellence. Equipment to enhance biomedical research and education at UAM. The funds were used to purchase a plain jacket bomb calorimeter (Model 1341 Parr Plain-Jacket Calorimeter. This calorimeter is capable of conducting two tests per hour.

2016 Research Grant in the amount of \$1500.00 awarded to conduct “Surveys of Bat Diversity in Southeastern Arkansas” awarded by University of Arkansas—Monticello Faculty Research Committee.

2015 Research Grant in the amount of \$2200.00 awarded to run toxin analysis on environmental samples collected in an agricultural zone of Southeast Arkansas awarded by University of Arkansas—Monticello Faculty Research Committee.

PROFESSIONAL COMPETENCE AND ACTIVITIES

AWARDS/INTERNAL GRANTS/APPOINTMENTS

- 2021** Science equipment request for biology faculty in the amount of \$7450. Purchase of plain jacket bomb calorimeter for research and involvement of undergraduate students for research experience.
- 2019/2020** College of Sciences Teaching Award. Auburn University at Montgomery
- 2018** Faculty small research grant in the amount of \$1000. Bought triple high nets and batcam to aid in “Surveys of Bat Diversity in Southeastern Arkansas”
- 2017** New Faculty Grant-in-aid in the amount of \$4912 awarded to conduct “Surveys of Bat Diversity in Southeastern Arkansas” awarded by AUM.
- 2014** Bat speciation expert for the state of Alabama. Appointed by Dr. Sharon P. Massingale, Public health laboratory director, ADPH, Bureau of Clinical Laboratories. This is a joint cooperation with the ADPH, Alabama Wildlife and Freshwater Fisheries, and AUM where I receive bats after they have been tested for rabies. I identify bats to species, catalogue and preserve the carcasses, and use the information to update geographic distribution of bat rabies in the state.

SCHOLARLY PRESENTATIONS & INVITED LECTURES

- 2021** Energy Content of Seeds of Palmer’s Pigweed (*Amaranthus palmeri*) from the Diet of Scaled Quail (*Callipepla squamata*) from Southeastern New Mexico. 104th Annual Meeting of the Arkansas Academy of Science. UAM Student (Paige Eddington) presentation. Hosted by the University of Arkansas – Fort Smith. Held virtually on April 9-10, 2021. <https://youtu.be/Vp3F2EylLhA>
- 2019** Energy Content of Seeds of Texas Doveweed (*Croton texensis*) from the Diet of Mourning Doves (*Zenaida macroura*) from Southeastern New Mexico. 103rd Annual Meeting of the Arkansas Academy of Science. Student poster presentation. Hendrix College; March 29-30, 2019.
- 2018** Organochloride pesticides present in animal fur, soil, and streambed in an agricultural region of southeastern Arkansas. 102nd Annual Meeting of the

Arkansas Academy of Science. Student poster presentation. Arkansas State University; April 6-7, 2019.

- 2018** AUM Connected. Going Batty: An Introduction to Bats of the Eastern United States (March 2018).
- 2017** AUM Connected. Bats: Misunderstood Creatures of the Night (October 2017)
- 2017** Organochloride pesticides present in animal fur, soil, and streambed in an agricultural region of southeastern Arkansas. 22nd Annual Meeting of the Southeastern Bat Diversity Network & 27th Annual Colloquium on the Conservation of Mammals in the Southeastern U.S.
- 2017** Invited speaker for AU-COSAM SciPub (September 28, 2017). An “Itchy” Situation: Bats, White Noses, and a Terrible Fungus”
- 2017** Invited speaker for the Robert and Jean Adams Foundation Clinical Laboratory Sciences Symposium (March 31, 2017). An “itchy” situation: Investigating the fungus that causes WNS in bats.
- 2016** Characterization of N-linked glycan profiles in bat gastrointestinal tissues specific to influenza A viruses. Olivia Mann^a, Chun-Kai Yang^a, Scott Rush^b, Matthew E Grilliot^c, George Peng Wang^d, and Xiu-Feng Wan^a. Merit-NIH National Veterinary Scholars Symposium. Ohio State University, Columbus OH.
- 2015** DDT and DDE present in the fur of Rafinesque’s Big-eared Bats (*Corynorhinus rafinesquii*) and Hispid Cotton Rat (*Sigmodon hispidus*) in an agricultural region of southeastern Arkansas. 62nd Annual Meeting of the Southwestern Association of Naturalists. San Diego State University, San Diego, CA.

PEER-REVIEW OF SCHOLARLY WORK

An attachment point for meaningful musculoskeletal learning. **The American Biology Teacher March 2021.**

Using visuals to help explain tonicity to introductory biology students. **The American Biology Teacher March 2020.**

Gas Exchange Gamified: Teaching Respiration Physiology with a Novel Board Game. **The American Biology Teacher March 2019.**

Hot or Cold Blooded? A laboratory activity investigating thermoregulation in animals using accessible technology. **The American Biology Teacher December 2018.**

Issues with Tissues: A tale of gameful learning in an introductory undergraduate biology

laboratory course. **The American Biology Teacher August 2016.**

Intra- and Interspecific Variability of Echolocation Pulse Acoustics in the African Megadermatid Bats. **Acta Chiropterologica July 2015.**

PARTICIPATION IN PROFESSIONAL ORGANIZATIONS

Southeastern Bat Diversity Network
Alabama Bat Working Group
American Society of Mammalogists
The American Biology Teacher
Southwestern American Naturalist

LEADERSHIP AND SERVICE

SCIENCE DEPARTMENT COMMITTEES

API and APII Coordinator
Coordinator for Principles of Biology I lab re-writes
Co-chair of hiring committee for 2 Anatomy and Physiology lecturers
Chair of hiring committee for Biology lab coordinator
Committee for grade appeal (Feb. 2021)
Hiring committee for 9-month tenure track biology faculty

COLLEGE AND UNIVERSITY COMMITTEES

- Green Alliance/Sustainability Advisor (now called SAGE)
- Tree Campus USA (November 2017-Present)
 - Alabama Urban and Community Forestry Volunteer Leadership Training Program (Building Urban and Community Forestry Initiatives)
- Teaching effectiveness committee (served in place of Dr. Sue Thomson, Sept. 2017-May2018)
- Intercollegiate athletics committee (July 2018-Present)
- Strategic planning committee for facilities (Sept. 2018 – Present)
- Study abroad committee (Nov. 2018-Present)
- Hiring committee for Learning Specialist per title 3 Dept of Education Grant for Experiential Learning Opportunities for Students
- Hiring committee for Advisor of Health Sciences

COMMUNITY SERVICE RELATED TO THE FIELD OF EXPERTISE

- December 2017. The Alabama Bat Working Group has come up with a list of research priorities in the state. This way the group can have project proposals ready to go when funding becomes available. These priorities will also appear in the Bat Conservation Plan. Attached is the document I distributed at the meeting. Please review and rank the priorities. Priority #6. Gray bat toxicity from chemicals in Wheeler Lake Dr. Matt Grilliot, with Auburn University in Montgomery recently completed work documenting toxicity in bats in Arkansas and is a potential research partner for this project.
- Organized and hosted CampSchool for a group of homeschool students May 15-18th 2017. Students completed lab experiments as part of their high school credit in Chemistry, Biology, and Physics.
- November 2016, John Chambless (AIA, Principal, Chambless/King Architects) took me on a guided tour of the Daniel Pratt Cotton Gin facilities located in Prattville, Alabama for my expertise in identifying bats that were on the premises. We were able to locate a large colony of bats roosting in one of the buildings, and I was able to make recommendations about the steps his company needed to take during renovations. Building Urban and Community Forestry Initiatives 2016 (December 6, 2016)
- Assist homeowners and businesses with nuisance wildlife problems. My focus is particularly related to the control of bats. I consult with homeowners about ways to attract bats that can help control insect populations. I also consult with homeowners and businesses about ways to remove unwanted bats.
- Visits to schools: Travel to various schools to provide educational presentations. The presentations include slides and discussion of bats, their ecology and behavior, as well as the myths that surround them. Live bats are used, so students can see what the bats actually look like and how they behave.