



- 2018 **Corcoran, A. J.**, and T. J. Weller. Inconspicuous echolocation in hoary bats (*Lasiurus cinereus*). *Proceedings Royal Society B*. 285: 20180441  
– Featured “Research Highlight” in *Nature*
- 2017 **Corcoran, A. J.**, and C. F. Moss. Sensing in a noisy world: lessons from auditory specialists, echolocating bats. *Journal of Experimental Biology*. 220: 4554-66
- 2017 **Corcoran, A. J.**, and W. E. Conner. Predator counter-adaptations: The bat *Corynorhinus townsendii* uses stealth echolocation to overcome insect evasive-maneuvering and sonar-jamming defenses. *Animal Behaviour*. 132, 291-301.  
– Featured by *The Atlantic*
- 2016 **Corcoran, A. J.**, and W. E. Conner. How moths escape bats: Predicting outcomes of predator-prey interactions. *Journal of Experimental Biology*. 219, 2704-2715.
- 2015 **Corcoran, A. J.**, and H. A. Woods. Negligible energetic cost of sonar jamming in a bat-moth interaction. *Canadian Journal of Zoology*. 93, 331-335.
- 2014 **Corcoran, A. J.**, and W. E. Conner. Bats jamming bats: Food competition through sonar interference. *Science* 346: 745-747  
– Featured by *BBC World News, National Geographic Magazine*
- 2014 **Corcoran, A. J.**, and N. I. Hristov. Convergent evolution of anti-bat sounds. *Journal of Comparative Physiology A* 200: 811-821
- 2013 **Corcoran, A. J.**, R. D. Wagner\*, and W. E. Conner. Optimal predator risk assessment by the sonar-jamming arctiine moth *Bertholdia trigona*. *PLoS ONE* 8: e63609  
– Featured by *Smithsonian Magazine*
- 2012 **Corcoran, A. J.**, and W. E. Conner. Sonar-jamming in the field: effectiveness and behavior of a unique prey defense. *Journal of Experimental Biology* 215: 4278-4287
- 2012 Conner, W. E., and **A. J. Corcoran**. Sound Strategies: the 65-million-year-old battle between bats and insects *Annual Review of Entomology* 57: 21-39
- 2011 **Corcoran, A.J.**, J.R. Barber, N.I. Hristov, and W.E. Conner. How do tiger moths jam bat sonar? *Journal of Experimental Biology* 214: 2416-2425
- 2010 **Corcoran, A.J.**, Conner, W.E., and J.R. Barber. Anti-bat tiger moth sounds: Form and function. *Current Zoology* 56: 343-357
- 2009 **Corcoran, A.J.**, Barber, J.R., and W.E. Conner. Tiger moth jams bat sonar. *Science* 325: 325-327  
– Featured by *Scientific American, NPR Science Friday, NY Times*

**GRANTS AND AWARDS (Total \$590,098)**

- 2019-22 National Science Foundation, “The Rules of Predation: Linking Biomechanics and Ecology in the Bat-Insect Arms Race” (\$488,757)
- 2017-18 National Geographic Society Explorer Grant, “Stealth and Silence in the Echolocating Hoary Bat, *Lasiurus cinereus*,” (\$29,900)
- 2011-13 Theodore Roosevelt Memorial Grant, American Museum Natural History (\$4141)
- 2012 Outstanding Graduate Student of 2012, Wake Forest Univ. (\$500)
- 2010 Elton C. Cocke Scholarship, Wake Forest Univ. (\$500)
- 2010 Graduate School Alumni Student Travel Award, Wake Forest Univ. (\$300)
- 2009 North American Society for Bat Research Outstanding Student Presentation (\$500)
- 2009-12 Vecellio Award for graduate research, Wake Forest Univ. (\$3,500)
- 2008 Dean’s Fellowship, Wake Forest Univ. (\$20,000)
- 2008 Andrew’s Fellowship, Purdue University (\$40,000; declined)
- 2002 Agriculture Research Scholarship, Purdue University (\$2,000)

**GRANTS—CONTRIBUTING WRITER (Total \$720,000)**

- 2013-17 Named Post-doc, “Bats Jamming Bats: A Novel Form of Intraspecific Prey Competition,” PI: W.E. Conner, National Science Foundation, (\$400,000)
- 2010-13 Named Grad. student, “Acoustic Aposematism, Mimicry and Jamming: Efficacy in the Field,” PI: W.E. Conner, National Science Foundation, (\$320,000)

**TEACHING EXPERIENCE***UC Colorado Springs, Sole Instructor*

Mammalogy, lecture and lab (Fall, 2019)

*Humboldt State University, Sole Instructor*

Animal Physiology, lecture and lab (spring, 2016)

Human Physiology, lecture and lab (fall, 2015)

Mammalogy, lab (spring, 2015)

*Wake Forest University, Teaching Assistant*

Animal Behavior, lab (fall, 2012)

Comparative Physiology, lab (spring, 2012)

*Humboldt State University, Teaching Assistant*

General Zoology, lab (fall 2005, spring 2006, fall 2006, spring 2007)

**INVITED SCHOLARLY PRESENTATIONS**

- 2018 Predawn aces: Acoustic and aerial warfare between bats and their insect prey. Ohio Wildlife Diversity Conference, Columbus, Ohio. **Keynote Speaker**
- 2018 Dogfights, stealth, and sonar-jamming: Evolutionary warfare between bats and their insect prey. Univ. North Carolina, Greensboro
- 2017 Hoary bats (*Lasiurus cinereus*) produce nearly undetectable echolocation calls and may fly in silence. Bat Echolocation Symposium, Tucson, Arizona **Plenary Speaker**
- 2016 Aeroecology of bat-insect interactions. Brown University, Aeromechanics and Evolutionary Morphology Group
- 2015 Sonar jamming in the bat-moth arms race. Claremont Colleges, Joint Sciences Department
- 2013 Sonar jamming in the bat-moth arms race. Bat Conservation and Management Workshop, Bat Conservation International
- 2012 Sonar jamming in the bat-moth arms race. Humboldt State University, Department of Biology
- 2012 Sonar jamming in the bat-moth arms race. Clemson University, Department of Biology
- 2012 Sonar jamming in the bat-moth arms race. Utah State University, Department of Biology
- 2012 Sonar jamming in the bat-moth arms race. University of Maryland, Departments of Biology and Psychology

**CONFERENCE PRESENTATIONS**

- 2018 Flock dynamics of shorebirds. Society for Integrative and Comparative Biology. San Francisco, CA
- 2017 Hoary bats (*Lasiurus cinereus*) produce nearly undetectable echolocation calls and may fly in silence. North Amer. Symposium for Bat Research. Knoxville, TN
- 2016 How moths escape bats: Predicting outcomes of predator-prey interactions. Society for Integrative and Comparative Biology. Portland, OR
- 2015 How moths escape bats: Predicting outcomes of predator-prey interactions. North American Symposium for Bat Research. Monterey, CA
- 2014 Bats (*Tadarida brasiliensis*) jam conspecifics in food competition. 167<sup>th</sup> meeting of the Acoustical Society of America, Providence, Rhode Island
- 2013 Sonar jamming in the field. 16<sup>th</sup> International Bat Research Conference, San Juan, Costa Rica
- 2013 Optimal predator risk assessment by a sonar-jamming moth *Janelia Farms* Conference – Dynamics of Prey Capture and Escape, Ashburn, VA

- 2012 Sonar jamming in the field: Efficacy and behavior of a unique prey defense. Tenth International Congress of Neuroethology, College Park, MD
- 2010 How do tiger moths jam bat sonar? North American Symposium for Bat Research. Denver, CO
- 2010 Niche breadth, foraging plasticity and conservation of *Myotis septentrionalis*, *M. lucifugus*, and *M. leibii*. Southeastern Bat Diversity Meeting, Asheville, NC
- 2009 Tiger moth jams bat sonar. North American Symposium for Bat Research, Portland, OR
- 2009 Limitations of biosonar: a tiger moth sonar jamming defense. Animal Sonar Symposium, Kyoto, Japan
- 2009 Sound strategies: acoustic aposematism, mimicry, and sonar jamming in the bat-moth arms race. Society for Integrative and Comparative Biology, Boston, MA

## UNDERGRADUATE MENTORING

### *University of North Carolina*

- 2018 Amanda Lohmann, first author of manuscript published in *Journal of Experimental Biology*.

### *Humboldt State University*

- 2016 Shin Tamura, presented at 2017 CSU Annual Biotechnology symposium
- 2016 Jeremy Gotgoota, presented at 2016 HSU Undergraduate research symposium
- 2016 Elizabeth Angel, presented to Arcata High School
- 2015-16 Christine Johnson

### *Wake Forest University*

- 2015 Orion Goodman, Presented at regional Soc. for Int. and Comp. Biology meeting
- 2013 Deanna Margius, Presented at Wake Forest Undergrad Research Day
- 2012 Kaitlyn Roman, Presented at Wake Forest Undergrad Research Day
- 2011 Zachary Walker Presented at North Carolina research and creativity symposium
- 2010-11 Ryan Wagner, Presented at North Carolina Acad. of Science annual meeting, co-author on published paper in *PLoS One*
- 2009 Wesley Johnson, Presented at Wake Forest Undergrad Research Day
- 2008 Megan Cullen, Presented at Wake Forest Undergrad Research Day

## PROFESSIONAL MEMBERSHIPS

- North American Society for Bat Research (2004-present)
- Society for Integrative and Comparative Biology (2012-present)

## PROFESSIONAL SERVICE

Reviewer for *Canadian Journal of Zoology*, *Ethology*, *Functional Ecology*, *Journal of Comparative Physiology A*, *Journal of Experimental Biology*, *Journal of Insect Physiology*, *Journal of Theoretical Biology*, *Journal of the Lepidopterist's Society*, *Journal of Mammalogy*, *National Geographic Society*, *Neotropical Biodiversity*, *PLoS ONE*, *Proceedings of the Royal Society B*, *Science Advances*, *Scientific Reports*, and *Zoology*

Participant in HSU Sustainable Learning Initiative for open educational resources (2015)

Student representative, Wake Forest University Honor Council (2012)

Student representative, North American Society for Bat Research (2011)

## PUBLIC OUTREACH

Public presentations at 25 high schools, science cafes, research stations, and libraries since 2012

Designed and maintain science education website on bats and moths, [www.sonarjamming.com](http://www.sonarjamming.com)

Consulted on YouTube videos by PBS's *It's Okay to Be Smart* and KQED *Deep Look* with 400,000 views

Co-developed interactive exhibits on bat echolocation at *SCIWORKS Children's Science Museum*, Winston Salem, NC

## MEDIA COVERAGE (Selected)

- 2018      Bats Forgo Sonar to Fly under the Radar, *Nature*  
<https://www.nature.com/articles/d41586-018-05033-z>
- 2018      These Bats Use Stealth Sonar, Likely to Evade Rivals, *Science Magazine*  
<http://www.sciencemag.org/news/2018/05/these-bats-use-stealth-sonar-likely-evade-rivals>
- 2017      The Hipster Ninja Bats That Sneaks Up on Their Prey, *The Atlantic*  
<https://www.theatlantic.com/science/archive/2017/11/the-arms-race-between-ninja-bats-and-sharp-eared-moths/545549/>
- 2015      These Bats Use Sonar to Jam the Signals of Their Rivals, *Smithsonian Magazine*  
<https://www.smithsonianmag.com/science-nature/these-bats-use-sonar-jam-signals-rivals-180954583/>
- 2014      Bats Sabotage Rivals' Senses with Sound in Food Race, *BBC News*  
<https://www.bbc.com/news/science-environment-29931995>
- 2013      Sonar Jamming Moths Hinder Hungry Bats, *Scientific American*  
<https://www.scientificamerican.com/video/sonar-jamming-moths-hinder-hungry-b2013-09-25/>
- 2009      Moths Can Escape Bats by Jamming Sonar, *NPR Science Friday*  
<https://www.npr.org/templates/story/story.php?storyId=106733884>
- 2009      Moths Use Sonar-Jamming Defense to Fend Off Hunting Bats, *Scientific American*  
<https://www.scientificamerican.com/article/sonar-jamming-tiger-moths-bats-echolocation-defense/>
- 2009      To Elude Hungry Bats, Tiger Moths Jam Sonar. *New York Times*  
<https://www.nytimes.com/2009/07/21/science/21objam.html>