

ALAN E. WILSON

Auburn University
School of Fisheries, Aquaculture, and Aquatic Sciences
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<http://www.wilsonlab.com>

EDUCATION

Georgia Institute of Technology - Atlanta, Georgia; Advisor: Dr. Mark E. Hay
2006 - Ph.D., Applied Biology; Minor in Chemical Ecology
Dissertation: *Cyanobacteria-grazer interactions: Consequences of toxicity, morphology, and genetic diversity*
Michigan State University - East Lansing, Michigan; Advisor: Dr. Orlando "Ace" Sarnelle
2001 - M.S., Fisheries and Wildlife; Specialization in Ecology, Evolutionary Biology, and Behavior
Thesis: *Complex interactions between zebra mussels and their planktonic prey*
University of North Carolina at Chapel Hill - Chapel Hill, North Carolina
1997 - B.A., Biology - Graduated with Distinction
Young Harris College - Young Harris, Georgia
1995 - A.S., Biology - Graduated with Highest Honors

PROFESSIONAL EXPERIENCES

Auburn University - School of Fisheries, Aquaculture, and Aquatic Sciences
2013 - present Associate Professor
National Science Foundation - Population and Community Ecology program, Division of Environmental Biology
2014 - 2016 Program Director
University of North Carolina at Chapel Hill - Global Research Institute
2013 Fellow
Auburn University - Department of Biological Sciences
2010 - 2013 Assistant Professor (courtesy joint appointment)
Auburn University - School of Fisheries, Aquaculture, and Aquatic Sciences
2007 - 2013 Assistant Professor
University of Michigan at Ann Arbor - Cooperative Institute for Limnology and Ecosystems Research (CILER)
2006 - 2007 Postdoctoral research investigator

GRANTS, CONTRACTS, AND AWARDS (Total \$5,887,174; External \$4,926,945; Awarded but Declined \$40,500)

CURRENT SUPPORT

2017 - 2020 NSF - Research Experiences for Undergraduates program - \$358,834 (Wilson, PI)
2017 - 2019 USDA-NIFA Aquaculture program - \$261,613 (Wilson, PI; Roy, co-PI)
2017 - 2019 Birmingham Water Works Board contract - \$57,720 (Wilson, PI)
2017 AU-OUC Joint Center - \$75,000 (Wilson, PI)
2016 - 2021 NSF - S-STEM program - \$2,034,382 (Jenda, PI; Wilson, co-PI)
2016 - 2018 NSF - INCLUDES program - \$285,769 (Jenda, PI; Wilson, co-PI)
2016 - 2018 Auburn University - AAES AgR-SEED program - \$50,000 (Wilson, PI)

PAST SUPPORT

2015 - 2016 Sha'Ked Microbial contract - \$19,475 (Wilson, PI)

2014 - 2016 NSF Intergovernmental Personnel Act contract - \$242,605 (Wilson, PI)
 2011 - 2015 USGS - National Institutes for Water Resources - \$247,891 (Wilson, PI)
 2014 - 2015 Sha' Ked Microbial contract - \$36,685 (Wilson, PI)
 2011 - 2014 Great Lakes Fishery Trust - \$385,000 (Höök, PI; Wilson, co-PI)
 2013 - 2014 Auburn University - Competitive Outreach Scholarship grant - \$20,000 (Goodwin, PI; Wilson, co-PI)
 2010 - 2014 NSF - Research Experiences for Undergraduates program - \$292,141 (Wilson, PI)
 2009 - 2014 NSF - Ecology program, collaborative project - \$113,578 (Wilson, PI)
 2009 - 2014 NSF - Ecology program, collaborative project - \$286,183 (Sarnelle, PI; Wilson, co-PI)
 2013 - 2014 USGS - Alabama Water Resources Institute - \$15,000 (Wilson, PI)
 2012 NSF - Ecology program, RAHSS supplement - \$5,750 (Wilson, PI)
 2010 - 2012 Auburn University - AAES Hatch program - \$50,000 (Wilson, PI)
 2010 - 2012 Auburn University - AAES Hatch program - \$50,000 (Wang, PI; Wilson, co-PI)
 2011 NSF - Ecology program, REU supplement - \$7,500 (Wilson, PI)
 2010 - 2011 NSF - Major Research Instrumentation RAPID program - \$100,002 (Moss, PI; Wilson, co-PI)
 2010 NSF - Ecology program, REU supplement - \$7,500 (Wilson, PI)
 2009 - 2010 NSF - Ecology program, RAHSS supplement - \$4,467 (Wilson, PI)
 2008 - 2010 Auburn University - Water Center - \$500,000 (Deutsch, PI; Wilson, co-PI)
 2008 - 2010 Auburn University - AAES Hatch program - \$50,000 (Wilson, PI)
 2008 - 2010 Auburn University - AAES Hatch program - \$50,000 (Stoeckel, PI; Wilson, co-PI)
 2007 - 2008 Auburn University - AAES Agricultural Initiatives program - \$54,650 (Wilson, PI)
 2007 - 2008 NCEAS Postdoctoral fellowship award - \$40,500 (awarded but declined)
 2006 - 2007 NOAA research awards - \$43,114
 2006 ASLO student travel award - \$250
 2003 - 2006 EPA STAR Graduate Research fellowship award - \$102,000
 2003 National Sea Grant Program grant - \$13,000
 2002 - 2003 NSF Integrative Graduate Education and Research Training Program awards - \$6,715
 2001 - 2002 Georgia Tech School of Biology Chemical Ecology fellowship award - \$7,000
 2000 Cooperative Institute for Limnology and Ecosystems Research grant - \$9,100
 1999 - 2000 NSF Research Training grants (Kellogg Biological Station, MSU) - \$2,000
 1999 - 2000 George H. Lauff scholarship awards (Kellogg Biological Station, MSU) - \$1,750

HONORS

2017 Fellow, Association for the Sciences of Limnology and Oceanography (ASLO)
 2017 College of Agriculture Dean's Award for Excellence in Instruction (Auburn University)
 2017 College of Agriculture Dean's Grantsmanship Award (Auburn University)
 2014 Auburn University Provost's Award for Excellence in Fostering Undergraduate Research and Creative Scholarship (*this award is the highest honor at Auburn University related to the mentoring of undergraduate students in research*)
 2014 Purdue University Scholar of Sustainability (awarded but declined)
 2013 University of North Carolina at Chapel Hill Global Research Institute Fellow
 2010 Alabama Agricultural Experiment Station Director's Junior Faculty Research Award (*this award is the highest research honor available to an Assistant Professor in my college*)
 2010 College of Agriculture Dean's Grantsmanship Award (Auburn University)
 2007 - 2008 NCEAS Postdoctoral Fellow (awarded but declined)
 2003 - 2006 EPA STAR Graduate Fellow (Georgia Tech)
 2004 Most Outstanding Biology Graduate Student Award 2004 (Georgia Tech)
 2002 - 2003 NSF Integrative Graduate Education and Research Training Fellow (Georgia Tech)
 2001 - 2002 School of Biology Chemical Ecology Fellow (Georgia Tech)
 1997 Phi Beta Kappa, national honor society (University of North Carolina at Chapel Hill)
 1995 - 1996 Sonya Stone Academic Scholarship (University of North Carolina at Chapel Hill)
 1995 Presidential Scholar Award (Young Harris College)

STUDENT HONORS AND AWARDS (Total \$341,498)

2017 - 2020	Edna Fernandez	NSF GRFP Fellowship	\$138,000
2017 - 2020	Nadia Bowles	Tuskegee NSF MAKERS scholarship	\$22,500
2017 - 2018	Mário Barros	Brazilian CAPES doctoral student fellowship	\$19,798
2017	Edna Fernandez	9 th US HABs Symposium – best poster	\$250
2017	Edna Fernandez	College of Agriculture Graduate Student Poster Showcase 2 nd place MS poster presentation	\$200
2017	Bettina Welz	DAAD RISE fellowship (German exchange program)	\$2,000
2017	Edna Fernandez	AL/MS American Water Works Assoc. scholarship	\$3,000
2017	Jess Choi	AU This is Research 3 rd place Science oral presentation	not applicable
2017	Edna Fernandez	SEC Campus Water Matters Group Competition	2 nd prize
2015	Brianna Olsen	Alabama Fisheries Association Best Oral Presentation	not applicable
2011 - 2014	Michael Chislock	EPA STAR Graduate Fellowship	\$126,000
2014	Anja Rebelein	DAAD RISE fellowship (German exchange program)	\$5,500
2014	Brianna Olsen	AU Graduate student thesis research grant	\$500
2014	Brianna Olsen	AU Graduate student travel grant	\$300
2013	Jo-Marie Kasinak	MidSouth Aquatic Plant Management Society Student Scholarship	\$2,000
2013	Jo-Marie Kasinak	Sigma Xi Grants-in-Aid of Research grant	\$600
2013	Jo-Marie Kasinak	AU Graduate student research grant	\$500
2013	Enrique Doster	AU Research Week 3 rd place STEM poster	not applicable
2013	Jo-Marie Kasinak	AU Outstanding Oral Presentation at Graduate Forum	not applicable
2012 - 2013	Enrique Doster	AU Undergraduate Research Fellow award	\$6,000
2012	Michael Chislock	SE NALMS conference best talk award	\$100
2012	Michael Chislock	AU Graduate student research grant	\$500
2012	Jo-Marie Kasinak	AU Graduate student research grant	\$500
2012	Michael Chislock	Harry Merriwether Outstanding student award	\$2,000
2012	Katie LeMay	Sigma Xi Grants-in-Aid of Research grant	\$400
2011 - 2012	Vernon Anderson	AU Undergraduate Research Fellow award	\$6,000
2011	Michael Chislock	AU Most Outstanding Masters Student award	not applicable
2011	Michael Chislock	AU Graduate student travel grant	\$500
2011	Michael Chislock	ASLO student travel grant	\$500
2011	Michael Chislock	AFS student travel grant	\$100
2011	Michael Chislock	AU FAA Graduate student travel grant	\$250
2010	Michael Chislock	AU Graduate student travel grant	\$300
2009	Michael Chislock	AU Graduate student research grant	\$1,000
2009	RajReni Kaul	AU Graduate student research grant	\$1,000
2009	RajReni Kaul	Alabama Fisheries Association student grant	\$500
2008	Michael Chislock	Sigma Xi Grants-in-Aid of Research grant	\$1,000

BOOK CHAPTERS (# STUDENT AUTHOR)

3. Bullard, A., D. DeVries, **A. Wilson**, H. Kinnucan, P. Clement, G. Lockaby, and C. Newland. 2015. Science or snake oil: Scholarship and peer review in the digital age. Book chapter in *Auburn Speaks: On Cyber and the Digital Domain*. Published by Auburn University. pp. 201-211.
2. **Wilson, A. E.** and M. F. Chislock#. 2013. Ecological control of cyanobacterial blooms in freshwater ecosystems. Invited book chapter in *Cyanobacteria: Toxicity, ecology, and management*. Editor: A. Ferrão-Filho. Nova Science Publishers, Inc., New York. pp. 213-221.
1. Vanderploeg, H. A., **A. E. Wilson**, T. H. Johengen, J. Dyble, O. Sarnelle, J. R. Leibig, S. D. Robinson, and G. P. Horst. 2013. The role of selective grazing by dreissenid mussels in promoting toxic *Microcystis* blooms

and other changes in phytoplankton composition in the Great Lakes. Invited book chapter in *Quagga and Zebra Mussels: Biology, Impacts, and Control, Second Edition*. Editors: T. Nalepa and D. Schloesser. CRC Press, Boca Raton, Florida. pp. 509-524.

PEER-REVIEWED PUBLICATIONS (# STUDENT AUTHOR)

45. Weaver, R. J.#, E. S. A. Santos, A. M. Tucker#, **A. E. Wilson**, and G. E. Hill. 2018. Carotenoid metabolism strengthens the link between feather coloration and quality. *Nature Communications* 9:73.
44. Jameel, Y.#, S. Stein#, E. Grimm#, C. Roswell, **A. E. Wilson**, C. Troy, T. Höök, and G. Bowen. *In press*. Physicochemical characteristics of a southern Lake Michigan river plume. *Journal of Great Lakes Research*.
43. Lyu, K.#, L. Zhang#, L. Gu#, X. Zhu#, **A. E. Wilson**, and Z. Yang. 2017. Cladoceran offspring tolerance to toxic *Microcystis* is promoted by maternal warming to toxic *Microcystis*. *Environmental Pollution* 227:451-459.
42. Olsen, B. K.#, M. F. Chislock#, A. Rebelein#, and **A. E. Wilson**. 2017. Nutrient enrichment and vertical mixing mediate two common off-flavors, 2-methylisoborneol and geosmin, in a drinking water reservoir. *Water Science & Technology: Water Supply* 17(2):500-507.
41. Olsen, B. K.#, M. F. Chislock#, and **A. E. Wilson**. 2016. Eutrophication mediates a common off-flavor compound, 2-methylisoborneol, in a drinking water reservoir. *Water Research* 92:228-234.
40. Ger, K. A., P. Urrutia-Cordero, P. C. Frost, L.-A. Hansson, O. Sarnelle, **A. E. Wilson**, and M. Lürling. 2016. The interaction between cyanobacteria and zooplankton in a more eutrophic world. *Harmful Algae* 54:128-144. **(Clarivate Analytics Web of Science Highly Cited Paper)**
39. Lyu, K.#, H. Guan#, C. Wu#, X. Wang#, **A. E. Wilson**, and Z. Yang. 2016. Maternal consumption of non-toxic *Microcystis* by *Daphnia magna* induces offspring tolerance to toxic *Microcystis* in offspring. *Freshwater Biology* 61(2):219-228.
38. Koch, R. E.#, **A. E. Wilson**, and G. E. Hill. 2016. The importance of carotenoid dose in supplementation studies with songbirds. *Physiological and Biochemical Zoology* 89(1):61-71.
37. Kollock, R. O., K. Games#, **A. E. Wilson**, and J. M. Sefton. 2016. Vehicle exposure and spinal musculature fatigue in military warfighters: a meta-analysis. *Journal of Athletic Training* 51(11):981-990.
36. Kollock, R. O., C. Andrews, A. Johnston, T. Elliott, **A. E. Wilson**, K. Games#, and J. M. Sefton. 2016. A meta-analysis to determine if lower extremity muscle strengthening should be included in military knee overuse injury prevention programs. *Journal of Athletic Training* 51(11):919-926.
35. Goessling, J. M.#, H. Kennedy, M. T. Mendonça, and **A. E. Wilson**. 2015. A meta-analysis of plasma corticosterone and heterophil:lymphocyte ratios – Is there conservation of physiological stress responses over time? *Functional Ecology* 29:1189-1196.
34. ArchMiller, A. A.#, E. F. Bauer#, R. E. Koch#, B. K. Wijayawardena#, A. Anil#, J. J. Kottwitz#, A. S. Munsterman#, and **A. E. Wilson**. 2015. Formalizing the definition of meta-analysis in *Molecular Ecology*. *Molecular Ecology* 24:4042-4051.
33. Kasinak, J.-M. E.#, C. J. Bishop#, R. A. Wright, and **A. E. Wilson**. 2015. Grass carp do not consume the nuisance benthic cyanobacterium, *Lyngbya wollei*. *Journal of Aquatic Plant Management* 53:74-80.
32. Lyu, K.#, L. Zhang#, X. Zhu#, G. Cui#, **A. E. Wilson**, and Z. Yang. 2015. Arginine kinase in the cladoceran *Daphnia magna*: cDNA sequencing and expression is associated with resistance to toxic *Microcystis*. *Aquatic Toxicology* 160(2015):13-21.
31. Kasinak, J.-M. E.#, B. M. Holt#, M. F. Chislock#, and **A. E. Wilson**. 2015. Benchtop fluorometry of phycocyanin as a rapid approach for estimating cyanobacterial biovolume. *Journal of Plankton Research* 37(1):248-257.
30. Kollock, R. O., K. Games#, **A. E. Wilson**, and J. M. Sefton. 2015. Effects of vehicle-ride exposure on cervical pathology – a meta-analysis. *Industrial Health* 53:197-205.
29. Games, K.#, J. M. Sefton, and **A. E. Wilson**. 2015. Whole-body vibration and blood flow and muscle oxygenation: a meta-analysis. *Journal of Athletic Training* 50(5):542-549.
28. Newcomer, B. W., P. H. Walz, M. D. Givens, and **A. E. Wilson**. 2015. Efficacy of bovine viral vaccination to prevent reproductive disease: a meta-analysis. *Theriogenology* 83(2015):360-365.
27. Chislock, M. F.#, K. L. Sharp#, and **A. E. Wilson**. 2014. *Cylindrospermopsis raciborskii* dominates under very low and high nitrogen-to-phosphorus ratios. *Water Research* 49:207-214.

26. Doster, E.#, M. F. Chislock#, J. Roberts, J. Kottwitz, and **A. E. Wilson**. 2014. Recognition of an important water quality issue at zoos: prevalence and potential threat of toxic cyanobacteria. *Journal of Zoo and Wildlife Medicine* 45(1):174-177.
25. Chislock, M. F.#, O. Sarnelle, B. K. Olsen#, E. Doster#, and **A. E. Wilson**. 2013. Large effects of consumer offense on ecosystem structure and function. *Ecology* 94(11):2375-2380.
24. Chislock, M. F.#, O. Sarnelle, L. M. Jernigan#, and **A. E. Wilson**. 2013. Do high concentrations of microcystin prevent *Daphnia* control of phytoplankton? *Water Research* 47(6):1961-1970.
23. Chislock, M. F.#, E. Doster#, R. A. Zitomer#, and **A. E. Wilson**. 2013. Eutrophication: Causes, consequences, and controls in aquatic ecosystems. *Nature Education Knowledge* 4(4):10.
22. Havird, J. C.#, R. P. Henry, and **A. E. Wilson**. 2013. Altered expression of Na⁺/K⁺-ATPase and other osmoregulatory genes in the gills of euryhaline animals in response to salinity transfer: A meta-analysis of 59 quantitative PCR studies over 10 years. *Comparative Biochemistry and Physiology, Part D* 8(2):131-140.
21. Goto, D., K. Lindelof#, D. L. Fanslow, S. A. Ludsin, J. J. Roberts, H. A. Vanderploeg, **A. E. Wilson**, and T. O. Höök. 2012. Ecological consequences of hypolimnetic hypoxia on survival and growth potential of *Daphnia mendotae* in the central basin of Lake Erie. *Aquatic Biology* 16:217-227.
20. Kozlowsky-Suzuki, B., **A. E. Wilson**, and A. S. Ferrão-Filho. 2012. Biomagnification or biodilution of microcystins in aquatic food webs? Meta-analyses of laboratory and field studies. *Harmful Algae* 18:47-55.
19. Logan, S. W., L. E. Robinson, **A. E. Wilson**, and W. A. Lucas. 2012. Getting the fundamentals of movement: A meta-analysis of the effectiveness of motor skill interventions in young children as assessed by the test of gross motor development. *Child: Care, Health & Development* 38(3):305-315.
18. White, J. D., R. B. Kaul#, L. B. Knoll, **A. E. Wilson**, and O. Sarnelle. 2011. Large variation in vulnerability to grazing within a population of the colonial phytoplankter, *Microcystis aeruginosa*. *Limnology and Oceanography* 56(5):1714-1724.
17. Berry, J. P., E. Lee, K. Walton, **A. E. Wilson**, and F. Bernal-Brooks. 2011. Microcystin production by a persistent cyanobacterial bloom in Lago de Patzcuaro (Michiacan, Mexico) and apparent bioaccumulation of the toxin in small commercial catches of fish. *Environmental Toxicology and Chemistry* 30(7):1621-1628.
16. **Wilson, A. E.**, R. B. Kaul#, and O. Sarnelle. 2010. Growth rate consequences of coloniality in a harmful phytoplankter. *PLoS ONE* 5(1): e8679. doi:10.1371/journal.pone.0008679
15. Sarnelle, O. and **A. E. Wilson**. 2008. Type III functional response in *Daphnia*. *Ecology* 89(6):1723-1732.
14. Tillmanns, A. R., **A. E. Wilson**, F. R. Pick, and O. Sarnelle. 2008. Meta-analysis of cyanobacterial effects on zooplankton population growth rate: species-specific responses. *Fundamental and Applied Limnology* 171(4):285-295.
13. **Wilson, A. E.**, D. C. Gossiaux, T. O. Höök, J. P. Berry, P. F. Landrum, J. Dyble, and S. J. Guildford. 2008. Evaluation of the human health threat associated with the hepatotoxin, microcystin, in the muscle and liver tissues of yellow perch (*Perca flavescens*). *Canadian Journal of Fisheries and Aquatic Sciences* 65(7):1487-1497.
12. Knoll, L. B., O. Sarnelle, S. K. Hamilton, C. E. H. Kissman, **A. E. Wilson**, J. B. Rose, and M. R. Morgan. 2008. Invasive zebra mussels (*Dreissena polymorpha*) increase cyanobacterial toxin concentrations in low-nutrient lakes. *Canadian Journal of Fisheries and Aquatic Sciences* 65(3):448-455.
11. **Wilson, A. E.** 2007. Journal impact factors are inflated. *BioScience* 57(7):550-551.
10. **Wilson, A. E.** and M. E. Hay. 2007. A direct test of cyanobacterial chemical defense: Variable effects of microcystin-treated food on two *Daphnia pulex* clones. *Limnology and Oceanography* 52(4):1467-1479.
9. **Wilson, A. E.**, W. A. Wilson#, and M. E. Hay. 2006. Intraspecific variation in growth and morphology of the bloom-forming cyanobacterium, *Microcystis aeruginosa*. *Applied and Environmental Microbiology* 72(11):7386-7389.
8. **Wilson, A. E.**, O. Sarnelle, and A. R. Tillmanns. 2006. Effects of cyanobacterial toxicity and morphology on the population growth of freshwater zooplankton: Meta-analyses of laboratory experiments. *Limnology and Oceanography* 51(4):1915-1924.
7. **Wilson, A. E.**, O. Sarnelle, B. A. Neilan, T. P. Salmon, M. M. Gehringer, and M. E. Hay. 2005. Genetic variation of the bloom-forming cyanobacterium *Microcystis aeruginosa* within and among lakes: Implications for harmful algal blooms. *Applied and Environmental Microbiology* 71(10):6126-6133.
6. Sarnelle, O. and **A. E. Wilson**. 2005. Local adaptation of *Daphnia pulex* to toxic cyanobacteria. *Limnology and Oceanography* 50(5):1565-1570.
5. Sarnelle, O., **A. E. Wilson**, S. K. Hamilton, L. B. Knoll, and D. F. Raikow. 2005. Complex interactions

- between the zebra mussel, *Dreissena polymorpha*, and the harmful phytoplankter, *Microcystis aeruginosa*. *Limnology and Oceanography* 50(3):896-904.
4. Hay, M. E., J. D. Parker, D. E. Burkepile, C. C. Caudill, **A. E. Wilson**, Z. P. Hallinan, and A. D. Chequer. 2004. Mutualisms and aquatic community structure: The enemy of my enemy is my friend. *Annual Review of Ecology, Evolution, and Systematics* 35:175-197.
 3. Raikow, D. F., O. Sarnelle, **A. E. Wilson**, and S. K. Hamilton. 2004. Dominance of the noxious cyanobacterium *Microcystis aeruginosa* in low-nutrient lakes is associated with exotic zebra mussels. *Limnology and Oceanography* 49(2):482-487.
 2. **Wilson, A. E.** 2003. Effects of zebra mussels on phytoplankton and ciliates: A field mesocosm experiment. *Journal of Plankton Research* 25(8):905-915.
 1. **Wilson, A. E.** and O. Sarnelle. 2002. Relationship between zebra mussel biomass and total phosphorus in European and North American lakes. *Archiv für Hydrobiologie* 153(2):339-351.
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OTHER LAB PUBLICATIONS (# STUDENT AUTHOR)

5. **Wilson, A. E.** and Z. A. Osorio#. 2016. DEB Numbers: Are aquatic ecologists underrepresented? *DEBrief* (NSF's Division of Environmental Biology blog) 11 July 2016.
 4. Chislock, M. F.#. 2015. Ecology and management of off-flavors and cyanotoxins. *LakeLine* Winter 2015:43-46.
 3. Olsen, B.#, C. Smith#, M. Chislock#, J. Kasinak#, and E. Doster#. 2013. Letter to the Editor: Association for the Sciences of Limnology and Oceanography (ASLO) 2013 Annual Meeting: Students' perspectives. *ASLO Bulletin* 22(3):83-84.
 2. **Wilson, A. E.**, M. F. Chislock#, E. Doster#, R. A. Wright, J. J. Kottwitz, H. Walz, and H. Rose. 2013. Toxic algae threaten livestock health. *The Alabama Cattleman* June 2013:16-17.
 1. Fowler, S., W. Deutsch, **A. E. Wilson**, and E. Reutebuch. 2012. Tallapoosa River basin numerical nutrient criteria for wadeable streams. Final Report for the Alabama Department of Environment Management, Agreement ADEM-C00594051
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PEER-REVIEWED PUBLICATIONS FROM **TEACHING (# STUDENT AUTHOR)**

19. Weaver, R. J.#, E. S. A. Santos, A. M. Tucker#, A. E. Wilson, and G. E. Hill. 2018. Carotenoid metabolism strengthens the link between feather coloration and quality. *Nature Communications* 9:73.
18. Novriadi, R.# 2017. A meta-analysis approach toward fish meal replacement with fermented soybean meal: effects on growth performance and feed conversion ratio. *Asian Fisheries Science Journal* 30(4):227-244.
17. Merkle, J.# and M. Philips. 2018. The wage impact teachers unions: a meta-analysis. *Contemporary Economic Policy* 36(1):93-115.
16. Willoughby, J. R.#, M. Sundaram, B. K. Wijayawardena#, M. C. Lamb, S. J. A. Kimble, Y. Ji, N. B. Fernandez, J. D. Antonides, N. J. Marra, and J. A. DeWoody. 2017. Biome and migratory behavior significantly influence vertebrate genetic diversity. *Biological Journal of the Linnean Society* 121(2):446-457.
15. Hrycik, A. R.#, L. Z. Almeida#, and T. O. Höök. 2017. Sub-lethal effects on fish provide insight into a biologically-relevant threshold of hypoxia. *Oikos* 126(3):307-317.
14. Kollock, R. O., K. Games#, A. E. Wilson, and J. M. Sefton. 2016. Vehicle exposure and spinal musculature fatigue in military warfighters: a meta-analysis. *Journal of Athletic Training* 51(11):981-990.
13. Munsterman, A. S.#, J. J. Kottwitz#, and R. R. Hanson. 2016. Meta-analysis of the effects of adhesion barriers on adhesion formation in the horse. *Veterinary Surgery* 45:587-595.
12. Kollock, R. O., C. Andrews, A. Johnston, T. Elliott, A. E. Wilson, K. Games#, and J. M. Sefton. 2016. A meta-analysis to determine if lower extremity muscle strengthening should be included in military knee overuse injury prevention programs. *Journal of Athletic Training* 51(11):919-926.
11. McGill, J.#, F. Adler-Baeder, and P. Rodriguez. 2016. Mindfully in love: A meta-analysis of the association between mindfulness and relationship satisfaction. *Journal of Human Sciences and Extension* 4(1):89-101.
10. Koch, R. E.#, A. E. Wilson, and G. E. Hill. 2016. The importance of carotenoid dose in supplementation studies with songbirds. *Physiological and Biochemical Zoology* 89(1):61-71.
9. Goessling, J. M.#, H. Kennedy, M. T. Mendonça, and A. E. Wilson. 2015. A meta-analysis of plasma

corticosterone and heterophil:lymphocyte ratios – Is there conservation of physiological stress responses over time? *Functional Ecology* 29:1189-1196.

8. ArchMiller, A. A.#, E. F. Bauer#, R. E. Koch#, B. K. Wijayawardena#, A. Anil#, J. J. Kottwitz#, A. S. Munsterman#, and A. E. Wilson. 2015. Formalizing the definition of meta-analysis in *Molecular Ecology*. *Molecular Ecology* 24:4042-4051.
7. Willoughby, J. R.#, M. Sundaram, B. K. Wijayawardena#, S. J. A. Kimble, Y. Ji, N. B. Fernandez, J. D. Antonides, M. C. Lamb, N. J. Marra, and J. A. DeWoody. 2015. The reduction of genetic diversity in threatened vertebrates and new recommendations regarding IUCN conservation rankings. *Biological Conservation* 191:495-503.
6. Kollock, R. O., K. Games#, A. E. Wilson, and J. M. Sefton. 2015. Effects of vehicle-ride exposure on cervical pathology – a meta-analysis. *Industrial Health* 53:197-205.
5. Games, K.#, J. M. Sefton, and A. E. Wilson. 2015. Whole-body vibration and blood flow and muscle oxygenation: a meta-analysis. *Journal of Athletic Training* 50(5):542-549.
4. Newcomer, B. W.#, P. H. Walz, M. D. Givens, and A. E. Wilson. 2015. Efficacy of bovine viral vaccination to prevent reproductive disease: a meta-analysis. *Theriogenology* 83(2015):360-365.
3. Havird, J. C.#, R. P. Henry, and A. E. Wilson. 2013. Altered expression of Na⁺/K⁺-ATPase and other osmoregulatory genes in the gills of euryhaline animals in response to salinity transfer: A meta-analysis of 59 quantitative PCR studies over 10 years. *Comparative Biochemistry and Physiology, Part D* 8(2):131-140.
2. Lucier-Greer, M.# and Adler-Baeder, F. 2012. Does couple and relationship education work for individuals in stepfamilies? A meta-analytic study. *Family Relations* 61: 756–769.
1. Logan, S. W.#, L. E. Robinson, A. E. Wilson, and W. A. Lucas. 2012. Getting the fundamentals of movement: A meta-analysis of the effectiveness of motor skill interventions in young children as assessed by the test of gross motor development. *Child: Care, Health & Development* 38(3):305-315.

PUBLICATIONS FROM NSF REU SITE (<http://wilsonlab.com/reu/>) (# UNDERGRADUATE AUTHOR)

21. Clay, M.#, J. Stoeckel, and B. Helms. In press. The role of abiotic and biotic cues in burrow habitat selection by juvenile crayfish. *Behaviour*.
20. Low, L.# and C. J. Anderson. In press. The threat of a nonnative, invasive apple snail to oligohaline marshes along the Northern Gulf of Mexico. *Journal of Coastal Research*.
19. Kasinak, J.-M. E., C. J. Bishop#, R. A. Wright, and A. E. Wilson. 2015. Grass carp do not consume the nuisance benthic cyanobacterium, *Lyngbya wollei*. *Journal of Aquatic Plant Management* 53:74-80.
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16. Low, L.# 2014. Wetland Invaders: Apple snail response to stress conditions. Whitman College senior thesis.
15. Nelson, T. R., D. Sutton#, and D. R. DeVries. 2014. Summer movements of the Gulf killifish (*Fundulus grandis*) in a northern Gulf of Mexico salt marsh. *Estuaries and Coasts* 37(5):1295-1300.
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13. Chislock, M. F., K. L. Sharp#, and A. E. Wilson. 2014. *Cylindrospermopsis raciborskii* dominates under very low and high nitrogen-to-phosphorus ratios. *Water Research* 49:207-214.
12. Doster, E.#, M. F. Chislock, J. Roberts, J. Kottwitz, and A. E. Wilson. 2014. Recognition of an important water quality issue at zoos: prevalence and potential threat of toxic cyanobacteria. *Journal of Zoo and Wildlife Medicine* 45(1):168-168.
11. Hossain, M. J., G. C. Waldbieser, D. Sun, N. K. Capps, W. B. Hemstreet, K. Carlisle#, M. J. Griffin, L. Khoo, A. E. Goodwin, T. Sonstegard, S. S. Schroeder, K. Hayden, J. C. Newton, J. S. Terhune, and M. R. Liles. 2013. Implication of lateral genetic transfer in the emergence of *Aeromonas hydrophila* isolates of epidemic outbreaks in channel catfish. *PLoS ONE* 8(11):e80943.

10. Arias, C. R., K. Koenders#, and A. M. Larsen. 2013. Predominant bacteria associated with red snapper *Lutjanus campechanus* (Poey, 1860) from the northern Gulf of Mexico. *Journal of Aquatic Animal Health* 25(4):281-289.
9. Olsen, B., C. Smith, M. Chislock, J.-M. E. Kasinak, and E. Doster#. 2013. Letter to the Editor: Association for the Sciences of Limnology and Oceanography (ASLO) 2013 Annual Meeting: Students' perspectives. *ASLO Bulletin* 22(3):83-84.
8. Chislock, M. F., O. Sarnelle, B. K. Olsen, E. Doster#, and A. E. Wilson. 2013. Large effects of consumer offense on ecosystem structure and function. *Ecology* 94(11):2375-2380.
7. Chislock, M. F., E. Doster#, R. A. Zitomer#, and A. E. Wilson. 2013. Eutrophication: Causes, consequences, and controls in aquatic ecosystems. *Nature Education Knowledge* 4(4):10.
6. Wilson, A. E., M. F. Chislock, E. Doster#, R. A. Wright, J. J. Kottwitz, H. Walz, and H. Rose. 2013. Toxic algae threaten livestock health. *The Alabama Cattleman newsletter*.
5. Boardman, E.# 2013. Late-summer drawdown and invertebrate assemblages in intermittent Alabama streams. University of Vermont senior thesis. May 1, 2013. Document and Oral Defense
4. Gough, H. M.#, A. M. Gascho Landis and J. A. Stoeckel. 2012. Behaviour and physiology are linked in freshwater mussel responses to drought. *Freshwater Biology* 57(11):2356-2366.
3. Imhoff, E., M. J. Moore# and R. J. DiStefano. 2012. Introduced alien ringed crayfish (*Orconectes neglectus neglectus* [Faxon, 1885]) threaten imperiled coldwater crayfish (*Orconectes eupunctus* Williams, 1952) in the Eleven Point River drainage, Missouri, USA. *Aquatic Invasions* 7(1):129-134.
2. Moore, M. J.#, R. J. DiStefano, and E. R. Larson. 2012. An assessment of life history studies for United States and Canadian crayfishes: Identifying biases and knowledge gaps to improve conservation and management. *Freshwater Science* 32:1276-1287.
1. Stump, A. J.# 2012. Bluegill Response to Supplemental Feeding and Patch Richness in Recreational Fishing Ponds. EKU Encompass Publication.

EDITORIAL, PROGRAM MANAGEMENT, AND REVIEWING ACTIVITIES

EDITORIAL DUTIES

Nature Scientific Reports - Editorial Board (Ecology and Evolutionary Biology section) - 2014 to present
Harmful Algae - Editorial Board - 2017 to present

FUNDING AGENCIES

Program management

National Science Foundation

Program Director in Population and Community Ecology (many panels and proposals) - 2014 to 2016
 Managed three panels for NSF Research Traineeship (NRT) program - 2014 to 2016
 Managed virtual and in-person panels for the NSF Coastal SEES program - Fall 2015 to Spring 2016
 Managed one panel for the NSF Graduate Research Fellowship program (GRFP) - Spring 2016
 Program manager of OPUS program - 2015
 Division representative for CAREER program - 2015 to 2016

Panel service (13 panels across 3 total agencies)

National Science Foundation (11 panels: Population and Community Ecology cluster (2x), Long-Term Ecological Research (LTER) Site Visit, Research Experiences for Undergraduates (2x), Basic Research to Enable Agricultural Development (BREAD), Ecological Biology DDIG, Graduate Research Fellowship program (3x), EPSCoR Research Infrastructure Improvement (RII) Track-2) New York Sea Grant (1 panel) USDA National Institute of Food and Agriculture (1 panel: Hispanic-serving Institutions Education Grants program)

Ad-hoc proposal reviews (12 total agencies/programs)

National Science Foundation (Population and Community Ecology, Ecological Biology, Ecosystem Science, BREAD, Office of Integrative Activities), Ecology and Oceanography of Harmful Algal Blooms (ECOHAB), University of Michigan Water Center, Netherlands Organisation for Scientific Research, New York Sea Grant, North Carolina Water Resources Research Institute, Oklahoma Water Resources Research Institute, Romanian National Council for Scientific Research, Portuguese Foundation for Science and Technology, Singapore Ministry of Education, United International College, United States Geological Survey

- National Institutes for Water Resources, US Environmental Protection Agency Numeric Criteria report
JOURNALS (127 manuscript reviews for 52 total journals)

Acta Oecologica, African Journal of Aquatic Science, American Naturalist, Aquatic Ecology, Archiv für Hydrobiologie, Auburn University Journal of Undergraduate Scholarship, Biochemical Systematics and Ecology, BMC Ecology, British Journal of Environment & Climate Change, Canadian Journal of Fisheries and Aquatic Sciences, Cell Biology and Toxicology, Ecological Monographs, Ecology, Ecology Letters, Ecosystems, Ecotoxicology and Environmental Safety, Environmental Management, Environmental Microbiology, Environmental Monitoring and Assessment, Environmental Science & Technology, Environmental Science and Pollution Research, F1000Research, Freshwater Biology, Freshwater Science, Global Ecology and Biogeography, Harmful Algae, Hydrobiologia, International Journal of Limnology, Journal of Agriculture of the University of Puerto Rico, Journal of Applied Microbiology, Journal of Applied Phycology, Journal of Chemical Ecology, Journal of Experimental Marine Biology and Ecology, Journal of Freshwater Ecology, Journal of Great Lakes Research, Journal of Natural Resources Education, Journal of Phycology, Journal of Plankton Research, Journal of Sea Research, Journal of Water and Health, Lake and Reservoir Management, Lakes and Reservoirs: Research and Management, Limnologica, Limnology and Oceanography, Limnology and Oceanography: Methods, Marine Drugs, Marine Ecology Progress Series, Microbial Ecology, Oecologia, Oikos, PLoS ONE, Water Research

OTHER REVIEWING ACTIVITIES

Administrative review of Dr. Royrickers Cook, Associate Provost and VP for Univ Outreach - 2017-2018
Tenure and promotion dossier review - 2017

Dissertation review for PhD student at National University of Sciences and Technology in Pakistan - 2016
US EPA Numeric nutrient criteria for lakes and reservoirs of the continental US report review - 2016

INVITED RESEARCH PRESENTATIONS

- 2018 Baylor University, Department of Biology, Waco, Texas.
- 2017 University of Alabama at Tuscaloosa, Water Research group. Tuscaloosa, Alabama.
- 2017 Alabama Department of Environmental Management, Surface water program. Montgomery, Alabama.
- 2017 Annual catfish update meeting, Auburn University, Demopolis, Alabama.
- 2016 Certified Crop Advisor meeting, Soil and Water Session. Auburn, Alabama.
- 2016 U.S. Environmental Protection Agency, Region 4. Atlanta, Georgia.
- 2016 University of Alabama at Birmingham, Department of Biology and Physics. Birmingham, Alabama.
- 2016 Alabama Water and Wastewater Institute, technical training program. Point Clear, Alabama.
- 2016 Alabama Department of Environmental Management, Surface water program. Montgomery, Alabama.
- 2016 Annual catfish update meeting, Auburn University, Demopolis, Alabama.
- 2016 Annual Arkansas Water Resources Meeting, University of Arkansas. Fayetteville, Arkansas.
- 2016 Auburn University Interdisciplinary Studies Program, Auburn University. Auburn, Alabama.
- 2016 University of Oklahoma, Environmental Studies Program. Norman, Oklahoma.
- 2016 U.S. Environmental Protection Agency, Region 10, Harmful Algal Bloom workshop. Seattle, WA.
- 2016 Alabama Rural Water Association, Annual meeting. Mobile, Alabama.
- 2016 Kennesaw State University, Department of Biology and Physics. Kennesaw, Georgia.
- 2015 Alabama Department of Environmental Management, Surface water program. Montgomery, Alabama.
- 2015 Blandy Experimental Farm, University of Virginia. Boyce, Virginia.
- 2015 Smithsonian Environmental Research Center. Edgewater, Maryland.
- 2014 U.S. Environmental Protection Agency, Region 4, Numeric Nutrient Criteria Workshop. Atlanta, GA.
- 2013 National Science Foundation, Division of Environmental Biology. Arlington, Virginia.
- 2013 Global Research Institute, University of North Carolina at Chapel Hill. Chapel Hill, North Carolina.
- 2012 North Carolina A&T University, Department of Animal Science. Greensboro, North Carolina.
- 2012 Tuskegee University, Department of Agricultural Sciences. Tuskegee, Alabama.
- 2012 Nanjing Normal University, School of Biological Sciences. Nanjing, China.
- 2012 University of West Georgia, Department of Biology. Carrollton, Georgia.
- 2012 Auburn University, Biosystems Engineering Department. Auburn, Alabama.
- 2012 Columbus State University, Department of Biology. Columbus, Georgia.

- 2012 37th Great Plains Limnology Conference, University of Arkansas. Fayetteville, Arkansas.
- 2012 Association of Southeastern Biologists, University of Georgia. Athens, Georgia.
- 2012 Jackson Lake Homeowners Association. Covington, Georgia.
- 2012 Purdue University, Department of Forestry and Natural Resources. West Lafayette, Indiana.
- 2011 XIII Brazilian Meeting of Limnology. Natal, Brazil.
- 2011 Florida Atlantic University, Department of Biology. Boca Raton, Florida.
- 2011 The Evergreen State College, Environmental Studies. Olympia, Washington.
- 2011 Olympia Film Society, Environmental Movie Festival. Olympia, Washington.
- 2011 Southeastern Ecology and Evolution Conference, Keynote, Auburn University. Auburn, Alabama.
- 2010 University of Notre Dame, Department of Biological Sciences. South Bend, Indiana.
- 2010 Tuskegee University, Department of Agricultural Sciences. Tuskegee, Alabama.
- 2010 University of West Alabama, Department of Biological Sciences. Livingston, Alabama.
- 2009 Purdue University, Department of Forestry and Natural Resources. West Lafayette, Indiana.
- 2009 Auburn University, Department of Biological Sciences. Auburn, Alabama.
- 2008 University of Georgia, Odum School of Ecology. Athens, Georgia.
- 2007 University of Miami, Rosenstiel School of Marine and Atmospheric Science. Miami, Florida.
- 2007 Florida International University, Department of Biological Sciences. Miami, Florida.
- 2007 Michigan State University, Kellogg Biological Station. Hickory Corners, Michigan.
- 2007 Grand Valley State University, Annis Water Resources Institute. Muskegon, Michigan.
- 2007 Auburn University, Department of Fisheries and Allied Aquacultures. Auburn, Alabama.
- 2006 NOAA Great Lakes Environmental Research Laboratory. Ann Arbor, Michigan.
- 2006 University of Waterloo, School of Biology. Waterloo, Ontario.
- 2006 Georgia Institute of Technology, IGERT Signals in the Sea seminar series. Atlanta, Georgia.

INVITED TEACHING PRESENTATIONS (IN ADDITION TO NORMAL TEACHING LOAD)

- 2017 Auburn University, School of Fisheries, Aquaculture, and Aquatic Sciences, Auburn, Alabama
Course: Careers and Orientation in Fisheries. Lecture topic: NSF Research Experiences for Undergraduates program
- 2017 Auburn University, School of Fisheries, Aquaculture, and Aquatic Sciences, Auburn, Alabama
Course: Careers in Fisheries. Lecture topic: Research in the WilsonLab
- 2017 Auburn University, Department of Crop, Soil, and Environmental Sciences, Auburn, Alabama
Course: Environmental Science course. Lecture topic: Causes, controls, and consequences of eutrophication
- 2017 Auburn University, Department of Biological Sciences, Auburn, Alabama
Course: Marine Biology Learning Community course. Lecture topic: Eutrophication: causes, controls, and consequences
- 2017 Auburn University, Auburn Global program.
Course: Auburn Global course. Lecture topic: NSF organizational structure, funding opportunities, and tips for success
- 2017 Auburn University, College of Agriculture
Workshop: Funding tips for the National Science Foundation.
- 2017 Kentucky-Tennessee Water Environment Association hour-long webinar from Auburn University.
Auburn, Alabama. Lecture title: Do harmful algal blooms threaten freshwater resources in the southeastern U.S.?
- 2016 Auburn University, Department of Biological Sciences, Auburn, Alabama
Course: Marine Biology Learning Community course. Lecture topic: Eutrophication: causes, controls, and consequences
- 2016 Auburn University, Honors College. Auburn, Alabama.
Lecture topic: NSF graduate fellowship discussion
- 2016 University of Oklahoma, Environmental Studies program. Norman, Oklahoma.
Course: Limnology. Lecture topic: Are harmful algal blooms a threat to U.S. freshwater lakes?
- 2015 Auburn University, Department of Biological Sciences, Auburn, Alabama