

# ALAN ELLIOTT WILSON

Auburn University ◇ Department of Fisheries and Allied Aquacultures  
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## **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

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## **PROFESSIONAL EXPERIENCE**

Auburn University - Department of Fisheries and Allied Aquacultures  
2007 - present Assistant Professor  
University of Michigan at Ann Arbor - Cooperative Institute for Limnology and Ecosystems Research (CILER)  
2006 - 2007 Postdoctoral research investigator

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## **RESEARCH GRANTS AND AWARDS**

### *CURRENT SUPPORT*

2010 - 2013 NSF - Research Experiences for Undergraduates program - \$292,141 (Wilson, PI)  
2009 - 2013 NSF - Ecology program, collaborative project - \$118,045 (Wilson, PI)  
2009 - 2013 NSF - Ecology program, collaborative project - \$286,183 (Sarnelle, PI)  
2008 - 2010 Auburn University Water Center - \$500,000 (Deutsch, PI)  
2008 - 2010 Auburn University AAES Hatch program - \$50,000 (Wilson, PI)  
2008 - 2010 Auburn University AAES Hatch program - \$50,000 (Stoeckel, PI)

### *PAST SUPPORT*

2007 - 2008 Auburn University AAES Agricultural Initiatives - \$54,650 (Wilson, PI)  
2007 - 2008 NCEAS Postdoctoral fellowship award - \$40,500 (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

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## **HONORS**

2007 - 2008 NCEAS Postdoctoral Fellow (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)

## **PUBLICATIONS (# DENOTES STUDENT AUTHOR)**

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 pulicaria* 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 pulicaria* 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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## **REVIEWING ACTIVITIES**

### **FUNDING AGENCIES**

National Science Foundation (panels: Population and Community Ecology cluster, Ecological Biology DDIG; proposals: Ecological Biology, Ecosystem Science), Ecology Netherlands Organisation for Scientific Research, Oklahoma Water Resources Research Institute, Ecology and Oceanography of Harmful Algal Blooms (ECO HAB)

### **JOURNALS**

*Ecological Monographs, American Naturalist, Limnology and Oceanography, PLoS ONE, Environmental Microbiology, Freshwater Biology, Environmental Science & Technology, Journal of Plankton Research, Marine Ecology Progress Series, Oikos, Water Research, Journal of Experimental Marine Biology and Ecology, African Journal of Aquatic Science, Aquatic Ecology, Archiv für Hydrobiologie, Biochemical Systematics and Ecology, Marine Drugs, Cell Biology and Toxicology, Ecotoxicology and Environmental Safety, Harmful Algae, Journal of Applied Microbiology, Hydrobiologia*

## **INVITED PRESENTATIONS**

- Wilson, A. E.** Ecological consequences of intraspecific variation. University of Notre Dame, Department of Biological Sciences, South Bend, Indiana, 2010.
- Wilson, A. E.** Are there consequences of herbivore intraspecific variation for managing noxious cyanobacterial blooms? Purdue University, Department of Forestry and Natural Resources, West Lafayette, Indiana, 2009.
- Wilson, A. E.** Are there consequences of herbivore intraspecific variation for managing noxious cyanobacterial blooms? Auburn University, Department of Biological Sciences, Auburn, Alabama, 2009.
- Wilson, A. E.** Functional redundancy in cyanobacteria-tolerant *Daphnia pulicaria*. University of Georgia, Odum School of Ecology. Athens, Georgia, 2008.
- Wilson, A. E.** Community genetics of cyanobacteria-grazer interactions: Consequences for harmful algal blooms. University of Miami, Rosenstiel School of Marine and Atmospheric Science. Miami, Florida, 2007.
- Wilson, A. E.** Community genetics of cyanobacteria-grazer interactions: Consequences for harmful algal blooms. Florida International University, Department of Biological Sciences. Miami, Florida, 2007.
- Wilson, A. E.** Grazer-cyanobacteria interactions: Consequences for harmful algal blooms in freshwater systems. Auburn University, Department of Fisheries and Allied Aquacultures. Auburn, Alabama, 2007.
- Wilson, A. E.** Community genetics of cyanobacteria-grazer interactions. Michigan State University, Kellogg Biological Station. Hickory Corners, Michigan, 2007.
- Wilson, A. E.** Community genetics of cyanobacteria-grazer interactions. Grand Valley State University, Annis Water Resources Institute. Muskegon, Michigan, 2007.
- Wilson, A. E.** Should we avoid eating Lake Erie yellow perch during a cyanobacterial bloom? University of Waterloo, School of Biology. Waterloo, Ontario, 2006.
- Wilson, A. E.** Cyanobacteria-grazer interactions: Consequences of toxicity, morphology, and genetic diversity. Georgia Institute of Technology, IGERT Signals in the Sea seminar series. Atlanta, Georgia, 2006.
- Wilson, A. E.** Cyanobacteria-grazer interactions: Effects of toxicity, morphology, and genetic diversity. Great Lakes Environmental Research Laboratory. Ann Arbor, Michigan, 2006.
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## **GRADUATE STUDENT ADVISEMENT**

### **PRINCIPAL ADVISOR**

Michael Chislock	Masters candidate	Summer 2008 to present
RajReni Kaul	Masters candidate	Summer 2008 to present

### **COMMITTEE MEMBER**

Kathleen Morrow	Doctoral candidate	Spring 2008 to present
Andrew Landis	Doctoral candidate	Fall 2009 to present
Stephen Woodard	Masters candidate	Fall 2009 to present

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## **UNDERGRADUATE STUDENT ADVISEMENT**

Kristin Adamson	Wildlife major	Spring 2008 to present
Steven Cason	Wildlife major	Spring 2010 to present
Nathan Campbell	Geology major	Fall 2007 to Spring 2009
Erin Cash	Fisheries major	Spring 2009 to Fall 2009
MacGyver Buck	Fisheries major	Spring 2008 to Summer 2008
Ashley Wilson	Pre-veterinary major	Spring 2008
Adam Wilkins	Business major	Spring 2008

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## **TEACHING EXPERIENCE**

- 2008 - 2010 Linnology - Auburn University - Department of Fisheries and Allied Aquacultures  
Developed and updated required core course for all departmental undergraduates
- 2010 Special Problems - Auburn University - Department of Fisheries and Allied Aquacultures  
Developed graduate level course to introduce students to the concepts and limitations of meta-analysis
- 2010 Directed studies - Auburn University - Department of Fisheries and Allied Aquacultures  
Developed course on the metabolic theory of phytoplankton for undergraduate student