

MEGHAN A. DUFFY

School of Biology
Georgia Institute of Technology
310 Ferst Drive
Atlanta, GA 30332-0230

duffy@gatech.edu
Phone: 1-404-894-8426
Fax: 1-404-894-0519
<http://www.duffylab.com>

EMPLOYMENT

Georgia Institute of Technology, Atlanta, GA 2008-present
Assistant Professor, School of Biology

University of Wisconsin, Madison, WI 2006-2007
NSF Postdoctoral Fellow in Biological Informatics
Advisor: Anthony Ives

EDUCATION

Michigan State University, East Lansing, MI Ph.D., 2006
Ph.D. Dissertation title: Evolutionary and community ecology of parasitism in lake *Daphnia* populations
Advisors: Alan Tessier and Jeffrey Conner

Cornell University, Ithaca, NY B.S., *cum laude*, 2000
Major: Biological Sciences
Research Advisor: Nelson Hairston, Jr.

RESEARCH GRANTS

2009-2012: National Science Foundation. “Collaborative Research: Joint influences of host genetics and community context on eco-evolutionary host-parasite dynamics” (Duffy PI; collaborative with Spencer Hall, Indiana University; Duffy portion: \$370,000, total award: \$606,000)
2008-2010: National Science Foundation. “Research Starter Grant: The role of competition among parasites in driving patterns of disease” (\$59,625; includes RET supplement)
2006-2007: National Science Foundation. Postdoctoral Research Fellowship in Biological Informatics. “Spatiotemporal scaling of the ecological and evolutionary dynamics of host-parasite interactions” (\$120,000)
2005-2007: National Science Foundation Doctoral Dissertation Improvement Grant. “Selective predators and the dynamics of host-parasite interactions” (\$10,699)

FELLOWSHIPS

2005: Michigan State University Ecology, Evolutionary Biology and Behavior Program Fellowship
2003: EPA STAR Graduate Fellowship (Awarded but did not accept)
2002-2003, 2004-2006: National Science Foundation Graduate Research Fellowship
2001-2002: National Science Foundation Research Training Grant Fellowship, Michigan State University

2000-2001, 2003-2004: Michigan State University Distinguished Fellowship
2000: Michigan State University College of Natural Sciences Recruiting Fellowship
1999: Howard Hughes Research Fellowship, Cornell University

HONORS AND AWARDS

2006: Honorable Mention, Buell Award for the outstanding student oral presentation, Ecological Society of America
2006: Ecological Society of America Aquatic Ecology Section Best Talk Award
2005: P.E.O. Scholar Award (\$10,000)
2005: Carolyn E. Conway Endowed Scholar Award, P.E.O. Sisterhood
2005: Michigan State University EEBS Student Speaker Award

PUBLICATIONS

21. Hall, S.R., R. Smyth, C.R. Becker, **M.A. Duffy**, C.M. Knight, S. MacIntyre, A.J. Tessier, and C.E. Cáceres. 2010. Why are some lakes sicker? Disease ecology, habitat structure and the plankton. *BioScience*, in press.
20. **Duffy, M.A.** Ecological consequences of intraspecific variation in lake *Daphnia*. 2010. *Freshwater Biology*, in press.
19. **Duffy, M.A.** and S.E. Forde. 2009. Ecological feedbacks and the evolution of resistance. *Journal of Animal Ecology*, 78:1106-1112.
18. **Duffy, M.A.**, S.R. Hall, C.E. Cáceres and A.R. Ives. 2009. Rapid evolution, seasonality, and the termination of parasite epidemics. *Ecology*, 90(6):1441-1448.
17. **Duffy, M.A.** 2009. Staying alive: the post-consumption fate of parasite spores and its implications for disease dynamics. *Limnology and Oceanography*, 54(3):770-773.
16. Hall, S.R., C.M. Knight, C.R. Becker, **M.A. Duffy**, A.J. Tessier and C.E. Cáceres. 2009. Quality matters: resource quality for hosts and the timing of epidemics. *Ecology Letters*, 12(2):118-128.
15. Hall, S.R., C.R. Becker, J.L. Simonis, **M.A. Duffy**, A.J. Tessier, and C.E. Cáceres. 2009. Friendly competition: evidence for a dilution effect in a planktonic host-parasite system. *Ecology*, 90(3):791-801.
14. **Duffy, M.A.**, C.E. Brassil, S.R. Hall, A.J. Tessier, C.E. Cáceres, and J.K. Conner. 2008. Parasite-mediated disruptive selection in a natural *Daphnia* population. *BMC Evolutionary Biology*, 8:80.
13. Cáceres, C.E., A.J. Tessier, A. Andreou, **M.A. Duffy**. 2008. Stoichiometric relationships in vernal pond plankton communities. *Freshwater Biology*, 53(7):1291-1302.
12. **Duffy, M.A.** and S.R. Hall. 2008. Selective predation and rapid evolution can jointly dampen effects of virulent parasites on *Daphnia* populations. *American Naturalist*, 171(4): 499-510.
11. Rodrigues, J.L.M., **M.A. Duffy**, A.J. Tessier, D. Ebert, L. Mouton and T.M. Schmidt. 2008. Phylogenetic characterization and prevalence of *Spirobacillus cienkowskii*: a red-pigmented, spiral-shaped bacterial pathogen of freshwater *Daphnia* species. *Applied and Environmental Microbiology*, 74(5):1575-1582.
10. **Duffy, M.A.** 2007. Selective predation, parasitism, and trophic cascades in a bluegill-*Daphnia*-parasite system. *Oecologia* 153(2):453-460.

9. Hall, S.R., L. Sivars-Becker, C. Becker, **M.A. Duffy**, A.J. Tessier and C.E. Cáceres. 2007. Eating yourself sick: transmission of disease as a function of foraging ecology. *Ecology Letters* 10(3):207-218.
8. **Duffy, M.A.** and L. Sivars-Becker. 2007. Rapid evolution and ecological host-parasite dynamics. *Ecology Letters* 10(1):44-53. *reviewed by Faculty of 1000
7. Hall, S.R., A.J. Tessier, **M.A. Duffy**, M. Huebner and C.E. Cáceres. 2006. Warmer does not have to mean sicker: Temperature and predators can jointly drive timing of epidemics. *Ecology* 87(7):1684-1695.
6. Cáceres, C.E., S.R. Hall, **M.A. Duffy**, A.J. Tessier, C. Helmle and S. MacIntyre. 2006. Physical structure of lakes constrains epidemics in *Daphnia* populations. *Ecology* 87(6):1438-1444.
5. Hall, S.R., **M.A. Duffy**, A.J. Tessier and C.E. Cáceres. 2005. Spatial heterogeneity of daphniid parasitism in lakes. *Oecologia* 143(4):635-644.
4. **Duffy, M.A.**, S.R. Hall, A.J. Tessier and M. Huebner. 2005. Selective predators and their parasitized prey: Are epidemics in zooplankton under top-down control? *Limnology and Oceanography* 50:412-420.
3. Hall, S.R., **M.A. Duffy** and C.E. Cáceres. 2005. Selective predation and productivity jointly drive complex behavior in host-parasite systems. *American Naturalist* 165:70-81.
2. **Duffy, M. A.**, A.J. Tessier and M.A. Kosnik. 2004. Testing the ecological relevance of *Daphnia* species designations. *Freshwater Biology* 49(1):55-64.
1. **Duffy, M.A.**, L.J. Perry, C.M. Kearns, L.J. Weider, and N.G. Hairston, Jr. 2000. Paleogenetic evidence for a past invasion of Onondaga Lake, New York, by exotic *Daphnia curvirostris* using mtDNA from dormant eggs. *Limnology and Oceanography* 45(6):1409-1414.

PRESENTATIONS (first-authored only)

Invited

- 2010: American Society of Limnology and Oceanography, Santa Fe, NM
- 2010: Southeastern Ecology and Evolution Conference, Atlanta, GA (Closing address)
- 2010: Oberlin College, Biology Department
- 2010: Georgia Tech, IBSI chalk talk
- 2009: Miami University (Ohio), Department of Zoology
- 2009: McGill University, Biology Department
- 2009: Emory University, Population Biology, Ecology and Evolution Seminar
- 2009: Cornell University, "100 Years of Limnology at Cornell" Symposium
- 2009: University of South Carolina, Department of Biological Sciences
- 2008: Virginia Tech, Department of Biology
- 2008: Auburn University, Department of Fisheries and Allied Aquacultures
- 2008: Georgia Tech, Mathematical Biology and Ecology Seminar
- 2008: University of Georgia, Ecology of Infectious Disease Seminar
- 2008: University of Nebraska-Lincoln, School of Biological Sciences
- 2007: University of Michigan, Young Scientists' Symposium
- 2007: Ohio State University, Department of Evolution, Ecology, and Organismal Biology

2006: Purdue University, Department of Forestry and Natural Resources
2006: Georgia Tech, School of Biology
2006: Rice University, Department of Ecology and Evolutionary Biology,
2005: Michigan State University, Ecology, Evolutionary Biology and Behavior Program
2004: Jacques Monod Conference “Evolutionary ecology of host-parasite relationships”,
Roscoff, France

Contributed

2009: Ecological Society of America, Annual Meeting, Albuquerque, NM
2008: Ecological Society of America, Annual Meeting, Milwaukee, WI
2007: Ecological Society of America, Annual Meeting, San Jose, CA
2007: Fields Workshop “The Mathematics of Evolution: Adaptive Dynamics in Theory and Practice”, Ottawa, Canada
2006: Ecological Society of America, Annual Meeting, Memphis, TN
2006: American Society of Limnology and Oceanography, Summer Meeting, Victoria, British Columbia
2005: Joint Meeting of the Society for the Study of Evolution and American Society of Naturalists, Fairbanks, AK.
2005: Ecology and Evolution of Infectious Diseases Conference, Fort Collins, CO. (poster)
2004: Ecological Society of America, Annual Meeting, Portland, OR.
2003: Aquatic Sciences Meeting of the American Society of Limnology and Oceanography, Salt Lake City, UT.
2002: Society for the Study of Evolution, Champaign-Urbana, IL.
2001: American Society of Limnology and Oceanography, Aquatic Sciences Meeting, Albuquerque, NM.
1999: Fifth International Symposium on Cladocera, Plön, Germany.

PROFESSIONAL SERVICE

Co-director, Aquatic Chemical Ecology site REU program, Georgia Tech (2010)
Panelist for National Science Foundation Doctoral Dissertation Improvement Grant (DDIG) Ecology Panel (2008, 2009)
Reviewer for *American Naturalist*, *EcoHealth*, *Ecological Entomology*, *Ecology*, *Ecology Letters*, *Fundamental and Applied Limnology/Archiv für Hydrobiologie*, the German Research Foundation, *Heredity*, *Hydrobiologia*, *International Review of Hydrobiology*, *Journal of Evolutionary Biology*, *Journal of the Royal Society Interface*, Katholieke Universiteit Leuven, *Limnology and Oceanography*, the National Science Foundation (Biological Oceanography, Ecology, Ecosystem Studies, International Research Fellowship, Population and Community Ecology, Population and Evolutionary Processes), *Oecologia*, *Oikos*, *Parasitology*, *Proceedings of the Royal Society of London, Series B*, and *Trends in Ecology & Evolution*.
Web page administrator for Ecological Society of America’s Aquatic Ecology Section
Web News committee, Georgia Tech School of Biology
Judge for 2008 Siemens Regional Competition in Math, Science, and Technology
Organized oral session at 2009 Ecological Society of America Meetings on “Evolutionary Ecology of Invertebrate Host-Parasite Interactions” (with N. Gerardo, Emory)

TEACHING EXPERIENCE

Spring 2010: Biol 8802 Special Topics: Graduate seminar in Ecology and Evolution (new course designed by Duffy; 6 students)

Spring 2009: Biol 4803/8803 Special Topics: Population and Evolutionary Ecology (new course designed by Duffy; 17 students)

Fall 2008: Biol 2335 General Ecology (co-taught; 94 students)

POSTDOCTORAL FELLOW SUPERVISED

Sara Henry Thomas (2009-present)

GRADUATE STUDENT SUPERVISED

Rachel Penczykowski (2008-present; Georgia Tech's President's Fellowship Recipient)

GRADUATE STUDENT THESIS COMMITTEES

Keri Goodman (2008-present)

Melanie Heckman (2009-present)

Zachary Marion (2008-present)

Doug Rasher (2008-present)

Robert Drew Sieg (2008-present)

Jiaqi Tan (2009-present)

UNDERGRADUATE RESEARCH STUDENTS

Tamanna Ahmed (2010-present)

Derek DeRaps (2008)

Laura Geronimo (2008)

Seda Grigoryan (2010-present)

Jessica Housley (2008-2009)

Natalie Huch Hardegee (2008)

Kristine Jansen (2010-present)

Kathryn Kenline (2009-present)

Susie Lee (2010-present)

Abigail Reynolds (2009-present)

Bonnie Ann Sarrell (2009-present)

Sierra Schmidt (2008)

Zayani Sims (2009)

Karla Van Rensburg (2009-present)

Grace Wilkinson (2009; REU)

PROFESSIONAL SOCIETIES

American Society of Limnology and Oceanography

American Society of Naturalists

Ecological Society of America

Society for the Study of Evolution

PROFESSIONAL DEVELOPMENT

2006: Selected participant for NSF-funded ADVANCE workshop at Rice University

2006: Workshop: "Innovative teaching and active learning in the biological sciences"