

Carolyn L. Keogh

Odum School of Ecology, University of Georgia
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EDUCATION

Emory University, Atlanta, GA

Bachelors of Science Biology, Environmental Studies

December 2007

Odum School of Ecology, University of Georgia, Athens, GA

PhD in Ecology Advisor: Dr. James E. Byers

anticipated completion February 2016

RESEARCH INTERESTS

- Disease ecology in marine communities
 - Determinants of invasive species establishment and spread
 - The role of life history trade-offs in shaping host immune defense
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PUBLICATIONS

Chaves, L.F., **C.L. Keogh**, G.M. Vazquez-Prokopec and U.D. Kitron. 2009. Combined sewage overflow enhances oviposition of *Culex quinquefasciatus* Say (Diptera: Culicidae) in urban areas. *Journal of Medical Entomology* 46(2): 220-226.

Blakeslee, A.M.H., **C.L. Keogh**, J.E. Byers, A.M. Kuris, K.D. Lafferty, and M. E. Torchin. 2009. Differential escape from parasites by two competing introduced crabs. *Marine Ecology Progress Series* 393: 83-96.

Chaves, L.F., L.C. Harrington, **C.L. Keogh**, A.M. Nguyen and U.D. Kitron. 2010. Blood feeding patterns of mosquitos: random or structured? *Frontiers in Zoology* 7:3.

Chaves, L.F., **C.L. Keogh**, A.M. Nguyen, G.M. Decker, G.M. Vazquez-Prokopec, and U.D. Kitron. 2011. Combined sewage overflow accelerates immature development and increases body size in the urban mosquito *Culex quinquefasciatus*. *Journal of Applied Entomology* 135: 611-620.

Blakeslee, A.M.H., A.L. Fowler, and **C.L. Keogh**. 2013. Marine invasions and parasite escape: updates and new perspectives. *Advances in Marine Biology*, ed. M. Lesser, 66: 87-169.

Byers, J.E., A.J. Malek, L.E. Quevillon, I. Altman, and **C.L. Keogh**. 2015. Pattern and process of parasite infection decoupled over a small spatial scale. *Oikos* 124(11): 1511-1519.

Blakeslee, A.M., **C.L. Keogh**, A.E. Fowler, B. Griffen. 2015. Assessing the effects of trematode infection on invasive green crabs in eastern North America. *PLOS One* 10(6): e0128674.

Keogh, C.L., J.E. Byers, M.E. Sanderson. 2015. Local adaptation to parasite-mediated selective pressure: comparing three congeneric co-occurring hosts. *Oecologia* DOI 10.1007/s00442-015-3461-9

Manuscripts in preparation

Keogh, C.L., O. Miura, T. Nishimura, J.E. Byers. The double edge to parasite escape: increased infection susceptibility in an invasive crab (*aimed at Ecology Letters*)

Keogh, C.L., O. Miura, T. Nishimura, J.E. Byers. Immune phenotype and energy allocation in invasive and native populations (*aimed at Functional Ecology*)

 PRESENTATIONS

"Increased susceptibility to infection in invasive versus native populations of the shore crab *Hemigrapsus sanguineus*," Carolyn L. Keogh, Tomohiro Nishimura, Osamu Miura, James E. Byers, Annual Benthic Ecology Meeting, *March 4-8, 2015, Quebec City, Canada. (Oral)*

"Eco-immunology in an invasive species: consequences of parasite escape," Carolyn Keogh, Tomohiro Nishimura, Osamu Miura, James E. Byers, University of Georgia EDGE Seminar, *Oct. 17, 2014 Athens, GA.*

"Enemy release and immune defense trade-offs in the invasive shore crab, *Carcinus maenas*, in the northwestern Atlantic," Carolyn L. Keogh, April M.H. Blakeslee, Blaine D. Griffen, James E. Byers, Annual Benthic Ecology Meeting, *March 20-23, 2013 Savannah, GA.(Oral)*

"Trematode diversity and local adaptation of host snails to trematode parasite attack," Carolyn L. Keogh, Martha E. Sanderson, James E. Byers. Annual Benthic Ecology Meeting, *March 20-23, 2013 Savannah, GA.(Poster)*

"Differential Escape from Parasites in Two Competing Introduced Crabs," April M.H.Blakeslee, Carolyn L. Keogh, Mark Torchin, Kevin D. Lafferty, Armand Kuris, James E. Byers. Annual Benthic Ecology Meeting, *March 10-13, 2010 Wilmington, NC. (Poster)*

"Correlates of Urban Mosquito Fitness: Combined sewage overflow streams and *Culex* oviposition choices," Carolyn L. Keogh, Luis F. Chaves, Uriel D. Kitron, Annual Meeting of the Georgia Mosquito Control Association. *October 22, 2009 Athens, GA. (Oral)*

"Parasite Release in Two Competing Non-native Crabs," Carolyn L. Keogh, April M.H.Blakeslee, James E. Byers Annual Benthic Ecology Meeting. *April 10, 2007 Providence, RI. (Oral presentation)*

GRANTS AND FELLOWSHIPS

American Museum of Natural History Lerner-Gray Marine Research Grant – "Parasites lost and gained: characterizing a novel parasite infection in invasive shore crabs" (\$1470, Spring 2015)

University of Georgia Center for Teaching and Learning's Learning Technologies Grant – "Lessons from the field: multimedia content development for use in blended and online learning in the Ecology classroom" – collaboration with Dr. Scott Connelly and Dr. James Porter (\$3150, Fall 2014)

NSF - Graduate Research Opportunities Worldwide and the Japan Society for the Promotion of Science – "Ecoimmunology of invasions: testing the relative roles of regulatory and compensatory release in invasive species success using invasive-native range comparisons" (\$~15,000, March 15-July 14, 2014) – collaboration with Dr. Gyo Itani and Dr. Osamu Miura, Kochi University, Japan

NSF - East Asia and Pacific Summer Institutes and Japan Society for the Promotion of Science – "Eco-immunology of invasions: testing the effect of enemy release on investment in immune defense" (\$~7000, Summer 2013) – collaboration with Dr. Gyo Itani and Dr. Osamu Miura, Kochi University, Japan

American Malacological Society - Melbourne Carriker Student Research Award – “Local adaptation to trematode parasite attack in three species of Littorine snails” (\$500; Spring 2012)

Odum School of Ecology - Small Grants Award - “Eco-immunology of invasions: *Hemigrapsus sanguineus* as a model system for testing the effect of parasite release on reprieve from investment in immune defense” (\$1100; Spring 2012)

Odum School of Ecology - Robert A. Sheldon Memorial Award – “Local adaptation to trematode parasite risk in snails” (\$500; Spring 2012)

NOAA - Georgia Oceans and Human Health Initiative 1-year traineeship -- “The impact of ectoparasitism by *Boonea impressa* (Gastropoda, Pyramidellidae) on the prevalence and persistence of human pathogens in *Crassostrea virginica* in GA” (~\$25,000; July 2010-June 2011)

National Science Foundation - Graduate Research Fellowship Program - “Trade-offs in immune responses to parasites as an explanation for invasive species success” (~\$130,000; July 2011-June 2014)

National Science Foundation, Research Experience for Undergraduates Fellowship, Shoals Marine Lab, Isles of Shoals, ME (Summer 2007)

Emory University Office of Sustainability Initiatives – Initiative grant recipient for “Ecofeedback: using technology to understand environmental impacts and influence decision-making” (Spring 2007)

TEACHING AND MENTORING EXPERIENCE

Mentoring summary - 9 total undergraduate students (7 women, 2 men), including primary advising of 1 honors thesis **Fall 2010 – present**

UGA Outstanding Teaching Assistant Award recipient **Spring 2015**

University of Georgia, Odum School of Ecology
Graduate Teaching Assistant – Ecology 1000 Lab **Fall 2014, Spring 2015**
 Instructor of record for three lab sections; presented introductory lectures for weekly labs; lead students in field and laboratory exercises in Ecology with the goal of introducing non-science majors to the science of Ecology and to the application of scientific principles to problem-solving; provided feedback and graded all lab reports and assignments

University of Georgia, Department of Biological Sciences
Graduate Teaching Assistant – Bioscience 1108 Lab **Fall 2009, Spring 2010**
 Instructor of record for two lab sections; lead students in inquiry based learning laboratory exercises in biology, including lessons in science writing; presented brief lectures to introduce concepts and materials; wrote, administered and graded all laboratory examinations

Emory University, Department of Environmental Studies

Field Course Teaching Assistant – ENVS 242 Modern and Ancient Tropical Environments

January 2010

Accompanied and assisted 18-member undergraduate group in all field activities on the island of San Salvador, Bahamas; mentored student teams in development and execution of 3-day independent field research projects; advised student groups on the “daily summaries” they presented to their classmates during each day of the field course

Teaching Assistant – ENVS 390 Environmental Studies Seminar series

Fall 2008, Spring 2009

Handled administrative aspects of course, including keeping records of student participation, and arranging travel for invited speakers

Teaching Assistant – ENVS 132 Integrative Methods in Environmental Studies

Spring 2008

Collaborated on Lab development, instruction, and grading; gave a guest lecture on marine ecology and biological oceanography

LEADERSHIP AND SERVICE ACTIVITIES

WiSci (UGA Women in Science organization) member (Fall 2014 - present)

“Gulf Coast Natural History training” content development and presentation, National Park Service Trails and Rails Program (Feb-March, 2014, 2015)

EcoReach (Ecology teaching outreach), Odum School of Ecology (Fall 2010 – present) – *an outreach program run by graduate students that develops and teaches science lessons at local schools*

Graduate Representative, Odum School of Ecology (elected; Fall 2012 – Spr 2013) – *liaison between graduate students and faculty for all aspects of graduate student life, including representing graduate student interests at faculty meetings and meetings of the Strategic Plan committee; lead meetings of the Odum Graduate Student Association*

Graduate Program Committee representative, Odum School of Ecology (elected; Fall 2012) – *represented grad student interests in meetings of the faculty committee concerned with the graduate curriculum*

Translational Ecology BA development committee, Odum School of Ecology (Spr 2012 – Fall 2012)

Undergraduate program committee, Odum School of Ecology (elected; Fall 2011-Spr 2012) – *represented graduate student interests and perspectives in meetings of the faculty committee concerned with the undergraduate curriculum, recruitment, and retention*

Facilities committee representative, Odum School of Ecology (elected; Fall 2010 – Spr 2011)

RELEVANT EMPLOYMENT HISTORY

Environmental Studies Department, Emory University, *Atlanta, GA*

Program Development Coordinator

January 2008 – July 2009

Coordinated all aspects of undergraduate program; provided academic advising for students; helped to design a new curriculum for Environmental Studies majors as well as a minor in Sustainability; carried out mosquito ecology research

ADDITIONAL SKILLS AND ACTIVITIES

Languages: English (native), French (proficient)