

Thomas Barnum
Odum School of Ecology
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EDUCATION

University of Georgia, Odum School of Ecology: Ph.D Ecology,
Advisor: C.M. Pringle Expected: Dec. 2013

Auburn University, Department of Entomology and Plant Pathology:
MSc, Entomology, Advisor: M.D. Eubanks May 2008
Thesis title: *Recruitment to and Defense of Aphids by Fire Ants and Native
Ants and an Estimate of Their Trophic Positions Using Stable Isotopes*

Elmira College, B.A. Biology June 2002

PUBLICATIONS

1. **Barnum, T.R.**, P. Verburg, C. Colón-Gaud, M.R. Whiles, K.R. Lips, C.M. Pringle, and S.S. Kilham. 2013. *Use of stable isotope ratios to characterize potential shifts in the isotopic niches of grazing insects following amphibian declines in a Neotropical stream*. *Journal of Tropical Ecology*. 29: 291-299.
2. Wilder, S.M., **T.R. Barnum**, D.A. Holway, A.V. Suarez, and M.D. Eubanks. 2013. *Introduced fire ants can exclude native ants from critical mutualist-provided resources*. *Oecologia*. 172: 197-205.
3. Frauendorf, T.C., C. Colón-Gaud, **T.R. Barnum**, M.R. Whiles, K.R. Lips, C.M. Pringle, and S.S. Kilham. 2013. *Trophic basis of production in a Neotropical headwater stream: Eating through a neotropical stream food web*. *Freshwater Biology*. 58: 1340-1352.
4. Connelly, S., C. Colón-Gaud, **T.R. Barnum**, M.R. Whiles, K.R. Lips, C.M. Pringle, and S.S. Kilham. Final review. *Initial versus longer-term effects of tadpole extirpations on algal resources and nitrogen cycling in a Neotropical stream*. *Freshwater Ecology*.
5. Boyoglu-Barnum, S., K. Gaston, S. Todd, C. Boyoglu, T. Chirkova, **T.R. Barnum**, P. Jorquera, L. Haynes, R. Tripp, M. Moore, and L. Anderson In Press. *A respiratory syncytial virus (RSV) anti-G protein F(ab')₂ monoclonal antibody suppresses mucous production and breathing effort in RSV rA2-line19F-infected Balb/c mice*. *Journal of Virology*.
6. **Barnum, T.R.**, J.D. Drake, C. Colón-Gaud, A.T. Rugenski, T.C. Frauendorf, S. Connelly, S.S. Kilham, M.R. Whiles, K.R. Lips, and C.M. Pringle. In review.

Food web structure persists after catastrophic amphibian declines in a Neotropical stream. Ecology Letters.

PAPERS IN PREPARATION

1. **Barnum, T.R.**, M.R. Whiles, K.R. Lips, S.S. Kilham, and C.M. Pringle. In prep. *What do Neotropical Stream-Dwelling Tadpoles Consume? A critical step towards understanding the ecological consequences of amphibian declines.*
2. **Barnum, T.R.**, C. Colón-Gaud, M.R. Whiles, K.R. Lips, S.S. Kilham, and C.M. Pringle. In prep. *Lack of functional redundancy in the top-down effects of algal-grazing macroinvertebrates on stream diatom community composition following pathogen-induced extirpations of algal-grazing tadpoles.*
3. **Barnum, T.R.** and M.D. Eubanks. *Tending and Defending: Comparing ant-aphid mutualisms involving native and invasive ants.*

PRESENTATIONS: NATIONAL MEETINGS

1. **Barnum, T.R.**, J.M. Drake, C. Colón-Gaud, A. Rugenski, T. Frauendorf, S. S. Kilham, M. R. Whiles, K. R. Lips, and C. M. Pringle. 2013. *Consequences of catastrophic amphibian declines on the food web attributes of a Neotropical stream.* Society of Freshwater Scientists, Jacksonville, FL.
2. **Barnum, T.R.**, J.M. Drake, C. Colón-Gaud, A. Rugenski, T. Frauendorf, S. S. Kilham, M. R. Whiles, K. R. Lips, and C. M. Pringle. 2013. *Food web properties persist following amphibian extirpations in a Neotropical stream.* Ecological Society of America. Minneapolis, MN.
3. Frauendorf, T, C. Colón-Gaud, **T.R. Barnum**, M. Whiles, K.R. Lips, C.M. Pringle, and S. Kilham. 2011. *Trophic basis of production in a Neotropical headwater stream.* Society of Freshwater Scientists, Providence, RI.
4. **Barnum, T.R.**, C.M. Pringle, S.S. Kilham, K.R. Lips, and M.R Whiles. 2010. *Structure of an algal based food web of a Neotropical stream pool before and after the extirpation of an amphibian assemblage.* North American Benthological Society/American Society of Limnology and Oceanography (NABS/ASLO) Joint Meeting, Albuquerque, NM.
5. **Barnum, T.R.** and M.D. Eubanks. 2007. *Tending and defending: Comparing aphid-ant mutualisms involving native ants and invasive ants.* Ecological Society of America, San Jose, CA.
6. **Barnum, T.R.** and M.D. Eubanks. 2006. *Tending and defending: Comparing aphid-ant mutualisms involving native ants and invasive ants.* Annual Entomological Society of America, Indianapolis, IN.

PRESENTATIONS: UNIVERSITY MEETINGS

1. **Barnum, T.R.**, C.M. Pringle, J.M. Drake, S.S. Kilham, K.R. Lips, and M.R. Whiles. 2013. *Food web structure persists in pools after catastrophic amphibian declines in a Neotropical stream*. Odum School of Ecology Graduate Student Symposium, Athens, GA.
2. **Barnum, T.R.**, S. Connelly, C.M. Pringle, S.S. Kilham, K.R. Lips, and M.R. Whiles. 2011. *Indirect effects of *Batrachochytrium dendrobatidis* on a Neotropical stream diatom community*. Odum School of Ecology Graduate Student Symposium, Athens, GA.
3. **Barnum, T.R.**, C.M. Pringle, S.S. Kilham, K.R. Lips, and M.R. Whiles. 2010. *Structure of an algal based food web of a Neotropical stream pool before and after the extirpation of an amphibian assemblage*. Odum School of Ecology Graduate Student Symposium, Athens, GA.
4. **Barnum, T.R.**, S. Connelly, C.M. Pringle, S.S. Kilham, K.R. Lips, and M.R. Whiles. 2009. *Quantifying food web changes in a Neotropical stream after the extirpation of its amphibian assemblage: A proposal*. Odum School of Ecology Graduate Student Symposium, Athens, GA.

GRANTS

Odum School of Ecology Small Grants, University of Georgia (\$1500)	2011
Robert Sheldon Memorial Award (\$500)	2010
Sigma Xi – Grants in aid of research (\$400)	2010
Odum School of Ecology Small Grants, University of Georgia (\$700)	2009

AWARDS

2 nd Place Research Presentation among PhD students, Graduate Student Symposium, Athens, GA.	2013
3 rd Place Research Presentation among PhD students, Graduate Student Symposium, Athens, GA.	2010

PROFESSIONAL SERVICES

Reviewer for journals: Ecosphere	
Guest lecture on Freshwater Ecosystems for the honors Ecosystems course	2013

Guest lecture on Mutualisms for Community and Population Ecology	2011
Served as the student representative on Graduate Program Committee	2011
Served as student representative on search committee for ecosystem hire	2010

TEACHING EXPERIENCE

University of Georgia 2010-2013

Teaching Assistantships

ECOL 3500: Ecology - avg. student evaluation: 4.17/5	Spr. 2013
ECOL 3500: Ecology – avg. student evaluation: 4.37/5	Fall 2012
ECOL 4070: Invertebrate Zoology – avg. student evaluation: 4.44/5	Spr. 2011
ECOL 3500: Ecology – avg. student evaluation: 4.20/5	Fall 2010

Undergraduate mentoring

Brett Bailey – course credit – directed study	May-Dec 2010
Performed gut content analysis on freshwater crabs, now a master's student at UMASS Amherst.	
Melody Tanner – course credit – directed study	Spr. 2012 – Fall 2012
Performed gut content analysis of <i>Farrodes</i> mayflies from a Neotropical stream to examine their trophic basis of production.	
Rebeca Gordon – course credit – directed study	Spr. 2012
Analyzed changes to a diatom community following amphibian declines	

Whitcomb Jr/Sr High School, Bethel, VT

Paraeducator (Teacher's aide)	Spr. 2004
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Elmira College

Teaching Assistant

Comparative Anatomy	Fall 2001
Freshman Biology	Spr. 2002