**JEFFREY DANIEL MUEHLBAUER**



Curriculum for the Environment & Ecology University of North Carolina- Chapel Hill

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# **Education**

M.S. Ecology. University of North Carolina-Chapel Hill (2010)

B.S. Biology & Chemistry, Ecology Emphasis, with Honors, *Summa cum laude.* Northern Arizona University (2007)

**Research & Employment**

University of North Carolina. Chapel Hill, NC (Advisor: Dr. Martin W. Doyle)

* University Fellow (2007-Present)
* Teaching Assistant, Departments of Geography & Ecology (2008-2009)
* Research Assistant, Department of Geography (summers 2007-2009) Ph.D. research

Northern Arizona University. Flagstaff, AZ (Advisor: Dr. Jane C. Marks)

* Research Associate, Department of Biology (2003-2007)

Ecological Restoration Institute. Flagstaff, AZ

* Research Assistant (2004-2007)
* Assistant Crew Leader (2006)

Duke University. Durham, NC

* Chemist/Geneticist Intern (2005)

Boy Scouts of America Camp Raymond. Parks, AZ

* Camp Counselor & Ropes Challenge Course Instructor (2003)

Northland Youth Conservation Corps. Flagstaff, AZ

* Americorps Team (2002)

**AWARDS & RECOGNITIONS**

CUAHSI Pathfinder Fellowship, 2010; Sigma Xi GiAR, 2010; NABS President’s Award, 2009; Binghamton Student Travel Award, 2009; Pogue Fellow (UNC) 2007-Present; UNC Graduate Professional Student Federation Travel Award, 2009; NAU Gold Axe Award, 2007; Bayless Biology Scholarship, 2007; NAU Biology Senior Scholastic Award, 2007; NAU Chemistry Senior Scholar Award, 2007; Raymond Scoutmaster Scholarship, 2006; Kirk Smith Scholarship, 4/2005; NAU Provost’s Scholarship, 2003-2007; Exchange Club Chapter and Regional Scholarships, 2003; 1st place in Aquatics, Canon International Envirothon, 2003; AZ Envirothon State Champion, 2003; Eagle Scout, 2001

**Major Publications**

Fuller, R.L., Griego, C., Muehlbauer, J.D., Dennison, J. & Doyle M.W. (2010) Response of stream macroinvertebrates in flow refugia and high-scour areas to a series of floods: A reciprocal replacement study. *Journal of the North American Benthological Society* **29**:750-760.

Muehlbauer J.D., LeRoy C.J., Lovett J.M., Flaccus K.K., Vlieg J.K. & Marks J.C. (2009) Short-term responses of decomposers to flow restoration in Fossil Creek, Arizona, USA. *Hydrobiologia* **618**:35-45*.*

Joseph, J.W., Odegaard, M.L., Ronnebaum, S.M., Burgess, S.C., Muehlbauer, J., Sherry, A.D. & Newgard, C.B. (2007) Normal flux through ATP-citrate lyase or fatty acid synthase is not required for glucose-stimulated insulin secretion. *Journal of Biological Chemistry* **282**:31592-31600. *DOI:10.1074/jbc.M706080200.*

**Other Publications & *In Progress* Publications**

Muehlbauer, J.D. & Doyle, M.W. (*Submitted*) Knickpoint effects on macroinvertebrates, sediment, and discharge in urban and forested streams: Urbanization outweighs micro-scale heterogeneity. *Submitted to the Journal of the North American Benthological Society.*

Jobe, R.T., Anton, A., Bidgood, E.P., Breckheimer, I., Caplow, S.C., Evans, B., Faestel, M., Muehlbauer, J.D., Palmquist, K., Seiter, S.A., Seymour, S.D., Tessel, S.M. & Moody, A. (*Submitted*) An assessment of the All-Taxa Biodiversity Inventory: Putting the science back in citizen-science. *Submitted to Ecological Applications.*

Muehlbauer, J.D., Doyle, M.W. & Bernhardt, E.S. (*In preparation*) Community responses to an experimental, spatio-temporal drought gradient. *In preparation for Ecology Letters*.

Muehlbauer, J.D., Duncan, J. & Doyle, M.W. (*In preparation*) Benign usage of salt tracers concurrent with aquatic ecology studies. *In preparation for Canadian Journal of Fisheries & Aquatic Sciences.*

Muehlbauer, J.D. (2010) Physical controls on aquatic macroinvertebrate community structure. MS Thesis, University of North Carolina- Chapel Hill.

Muehlbauer, J.D. (2007) Getting all wet at the ERI: A study of how riparian restoration influenced the aquatic ecosystem in Fossil Creek, Arizona. Ecological Restoration Institute Newsletter, Spring 2007. 3 pp.

**MAJOR PRESENTATIONS**

Muehlbauer, J.D. & Doyle, M.W. (2010) Does urbanization overcome micro-scale heterogeneity? Knickpoint effects on macroinvertebrates, sediment, and discharge in urban and forested streams (Oral Presentation). NABS Conference; Santa Fe, NM.

Muehlbauer, J.D., Bernhardt, E.S. & Doyle, M.W. (2009) Macroinvertebrate community responses to an experimental drought gradient on the outer coastal plain of North Carolina. NABS Conference; Grand Rapids, MI.

Muehlbauer, J.D. & Doyle, M.W. (2008) Knickpoint effects on habitat and the macroinvertebrate community. SE Stream Restoration Conference; Asheville, NC.

Muehlbauer, J.D., *et al.* (2007) Short-term effects of dam decommissioning and flow restoration in Fossil Creek. ESA/SER Conference; San Jose, CA.

Muehlbauer, J.D., *et al.* (2005) Diversion Dam Reduces Decomposition, Fungal Biomass and Macroinvertebrate Abundance and Diversity. NABS/AGU Conference; New Orleans, LA.

**PROFESSIONAL AFFILIATIONS**

American Society of Limnology and Oceanography (ASLO), 2009-Pres.

North American Benthological Society (NABS), 2008-Present

American Geophysicists Union (AGU), 2007-Present

Ecological Society of America (ESA), 2005-Present

Society for Ecological Restoration (SER), 2005-Present

Honor Society of Phi Kappa Phi, 2005-Present

Student Affiliates of the American Chemical Society (SAACS) 2003-2007.

**PROFESSIONAL SERVICE & SYNERGISTIC ACTIVITIES**

Guest lecturer, Chapel Hill/Carrboro City Schools, 2009-Present

Seminar Search Committee, UNC Curriculum in Ecology, 2008-2009, 2010-Present

Author Help Volunteer, Ecological Society of America, 2006-Present

Peer-reviewer, J Am Water Resources Assoc, Water Resources Research

Chapter President & VP, Student Affiliates of the American Chemical Society, 2004-2007.

Assistant Scoutmaster, Boy Scouts of America, 2003-2007

Coordinator, Sierra Student Coalition (SSC), 2002-2007

Organizer, Society of Environmental Communicators (SEC), 2005-2007

Coach, Sinagua High School Envirothon team, 2006-2007

Volunteer, Nature Conservancy, 2002-2005