**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-present)
* Research Assistant, Department of Geography (summers 2007-present)

Leibniz Institute of Freshwater Ecology & Inland Fisheries, Berlin, Germany (Collaborators: Drs. Klement Tockner, Michael Monaghan, Martin Pusch)

* Visiting Research Fellow (June-September 2011)

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**

IGB Fellowship in Freshwater Science, 2011

CUAHSI Pathfinder Fellowship, 2010

Sigma Xi GiAR, 2010

Cary IES Ecosystem Ecology Course, 2010

NABS President’s Award, 2009

Binghamton Student Travel Award, 2009

UNC Pogue Fellow, 2007-Present

UNC Graduate 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, 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

**Peer-Reviewed 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.

**Manscripts In Review & Other Publications**

Muehlbauer, J.D., Doyle, M.W. & Bernhardt, E.S. (*In Revision*) Macroinvertebrate community responses to a dewatering disturbance gradient in a restored stream. *Hydrology and Earth Systems Science Discussions* **7**:9599-9630.

Muehlbauer, J.D., Duncan, J. M. & Doyle, M.W. (*In Revision*) Benign use of salt slugs on aquatic macroinvertebrates: Measuring discharge with salt during an aquatic ecology study. *River Research & Applications.*

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

Muehlbauer, J.D. (2010) Ecological heterogeneity in streams: geomorphic and hydrologic influences macroinvertebrate community structure. MS Thesis, University of North Carolina- Chapel Hill. 138 pp.

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.

**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/ASLO Conference; Santa Fe.

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.

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.

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

**PROFESSIONAL AFFILIATIONS**

European Geosciences Union (EGU), 2011-Present

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

North American Benthological Society (NABS), 2008-Present

American Geophysical Union (AGU), 2007-Present

Ecological Society of America (ESA), 2005-Present

Society for Ecological Restoration International (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 Science Lecturer, Chapel Hill/Carrboro City Schools, 2009-2010

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

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

Peer-reviewer, LOFE, RRA, Restor. Ecol., JAWRA, WRR

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