**JEFFREY DANIEL MUEHLBAUER**



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# **Education**

Ph.D. Ecology *(In Progress)*. University of North Carolina- Chapel Hill (expected 2013)

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

B.S. Biology & Chemistry. Northern Arizona University (2007)

Ecology Emphasis, with Honors, *Summa cum laude.* 4.0 GPA.

**Research & Employment**

University of North Carolina. Chapel Hill, NC.

* University Fellow (2007–Pres.), Geography/Ecology TA/RA (2008–Pres.)

Leibniz Institute of Freshwater Ecology & Inland Fisheries (IGB). Berlin, Germany.

* Visiting Fellow (2011)

Northern Arizona University. Flagstaff, AZ.

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

Ecological Restoration Institute. Flagstaff, AZ.

* Assistant Crew Leader (2006), Research Assistant (2004–2007)

Duke University. Durham, NC.

* Chemist/Geneticist Intern (2005)

Boy Scouts of America Camp Raymond. Parks, AZ

* Camp Counselor & Ropes Challenge Course Instructor (2003)

**Recent Awards & Recognitions**

IGB Fellowship in Freshwater Science, 2011

CUAHSI Pathfinder Fellowship, 2010

Sigma Xi GiAR, 2010

NABS President’s Award, 2009

**Scientific Publications**

7) Muehlbauer, J.D. & Doyle, M.W. (*In Press*) Knickpoint effects on macroinvertebrates, sediment, and discharge in urban and forested streams: Urbanization outweighs micro-scale heterogeneity. *Freshwater Science.*

6) Riggsbee, J.A., Doyle, M.W., Julian, J.P., Manners, R., Muehlbauer, J.D., Sholtes, J. & Small, M.J. (*In Press*) Influence of aquatic and semi-aquatic organisms on channel forms and processes. In: *Treatise in Fluvial Geomorphology* (Ed E. Wohl). Elsevier.

5) Muehlbauer, J.D., Duncan, J. M. & Doyle, M.W. (2012) Benign use of salt slugs on aquatic macroinvertebrates: Measuring discharge with salt during an aquatic ecology study. *River Research & Applications.*

4) Muehlbauer, J.D., Doyle, M.W. & Bernhardt, E.S. (2011) Macroinvertebrate community responses to a dewatering disturbance gradient in a restored stream. *Hydrology and Earth System Sciences* 15:1771-1783.

3) 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.

2) 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. *Hydrobiologia* 618:35–45*.*

1) 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.

**THESES, OUTREACH, and Creative Writing Publications**

4) Muehlbauer, J.D. (2010) Ecological heterogeneity in streams: geomorphic and hydrologic influences macroinvertebrate community structure. MS Thesis, 138 pp.

3) 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.

2) Muehlbauer, J.D. (2004) Bridges, beer cans, and bulldozers: in search of answers along Abbey’s Road. *A Celebration of Ideas,* NAU Honors Fall 2004:14 pp.

1) Muehlbauer, J.D. (2004) Superhumans: Raskolnikov, Meursault, Napoleon, and beyond. *A Celebration of Ideas,* NAU Honors Spring 2004:10–12.

**INVITED, NON-CONFERENCE PRESENTATIONS**

“Water, watersheds & people”, UNC special course on water issues, February 2010

“Carbon dioxide” (for 200 children), Chapel Hill/Carrboro City Schools, September 2009

~10 technical presentations at national and international scientific conferences.

**TEACHING**

ENST 698: Cistern Water Quality Capstone Course. UNC, Chapel Hill, NC 1/2011–5/2011

* Provided guidance for 9-student undergraduate team in water quality sampling
* Facilitated data collection, analysis, and reporting as graduate research consultant

GEOG 442: River Processes. UNC, Chapel Hill, NC 8/2010–12/2010

* Graduate/upper undergraduate class in fluvial geomorphology
* Lectured occasionally, prepared and graded assignments as Teaching Assistant.

GEOG 110: Introduction to Environmental Systems. UNC, Chapel Hill, NC 8/2008–12/2008, 1/2011–5/2011.

* Freshman-level lecture class in geography, ~150 students
* Lectured occasionally, graded, and held office hours as Teaching Assistant.

ENST 201: Environment & Society. UNC, Chapel Hill, NC 8/2009–12/2009.

* Course for underclassmen on (inter)national environmental issues and policies
* Taught 3 recitation sections ~60 students; lectured, graded, led discussions.

ECOL 569: Current Issues in Ecology. UNC, Chapel Hill, NC 1/2009–5/2009.

* First-year Ecology graduate core class on researching and publishing a paper
* Led discussions, graded, provided writing assistance as Teaching Assistant.

HON 399: Beyond the Bachelors. NAU, Flagstaff, AZ 1/2006–5/2007.

* Teaching assistant for honors class for students considering graduate school
* Also assisted with course creation process: Syllabus/schedule planning
* Designed, supervised, and maintained online (Blackboard) class component

**PROFESSIONAL SERVICE & SYNERGISTIC ACTIVITIES**

Graduate Student President. UNC Curriculum for the Environment & Ecology, 2012–Pres.

Seminar Search Committee. UNC Curriculum for the Environment & Ecology

* Chair 2011–Pres.; Member 2008–2009, 2010–2011

Faculty Search Committee. UNC Curriculum for the Environment & Ecology, 2011–Pres.

Graduate Research Consultant. UNC Cistern Water Quality Capstone, 2011

Science volunteer. Lecturer, presenter, hand-on demos, mentoring, science fairs. Chapel Hill/Carrboro City Schools, NC Museum of Natural Science, NC State Fair, NC Division of Water Quality, Ravenscroft School. 2009–Pres.

Author English Help Volunteer. Ecological Society of America, 2006–Pres.

Tutor, Club President. Student Affiliates of the American Chemical Society. 2003-2007

Peer-reviewer. Ad-hoc reviewer for 7 scientific journals

**PROFESSIONAL AFFILIATIONS (BY JOIN DATE)**

ESA (2005), SER (2005), AGU (2007), SFS (2008), ASLO (2009), EGU (2011)