**JEFFREY DANIEL MUEHLBAUER**



Curriculum in Ecology, UNC-CH

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# **EDUCATION**

*University of North Carolina-Chapel Hill (UNC)*, Chapel Hill, North Carolina

Masters of Science in Ecology *in progress*

*Northern Arizona University (NAU)*, Flagstaff, Arizona, May 2007

Bachelor of Science in Biology with an emphasis in Ecology

Bachelor of Science in Chemistry

Honors Program

GPA: 4.0; *Summa cum laude*

**EMPLOYMENT & RESEARCH**

*Graduate Fellow, UNC River Group (Dr Martin Doyle). Chapel Hill, NC* 6/2007-Present

* Spent summer field season in Adirondacks measuring velocities and calculating shear stress during four-time-weekly flood releases, identifying macroinvertebrate communities, and surveying river channels.
* Created lab guide for Aquadopp acoustic Doppler velocimeter.
* Oversaw work of two undergraduate field assistants.
* Facilitated laboratory setup and management.

*Research Associate, NAU Aquatic Ecology Lab (Dr Jane Marks). Flagstaff, AZ* 8/2003-5/2007

* Measured aquatic ecosystem effects of a diversion dam in Fossil Creek, AZ.
* Designed an independent research project studying ecological impacts of dam decommissioning.
* Analyzed leaf litter decomposition, invertebrate abundance, and fungal biomass using a Before-After Control-Impact (BACI) design.

*Research Assistant, Ecological Restoration Institute. Flagstaff, AZ* 3/2004-5/2007

* Promoted to Assistant Crew Leader and supervised field research teams.
* Collected ecological field data during summer field seasons.
* Applied ecological, statistical, and basic scientific skills while working in a lab.

*Intern, Duke University. Durham, NC* 5/2005-8/2005

* Conducted biomedical/chemical research in an academic lab.
* Independently-researched enzymes affecting Diabetic β-cell function.

*Ropes Instructor, BSA Camp Raymond. Parks, AZ* 6/2003-8/2003

* Led Boy Scout patrols through outdoor physically and mentally challenging, team-building activities.

*Northland Youth Conservation Corps.* *Flagstaff, AZ* 6/2002-8/2002

* Worked with a team of other Americorps volunteers in invasive weed removal and forest restoration thinning projects.

**PUBLICATIONS**

Muehlbauer J.D., LeRoy C.J., Lovett J.M., Flaccus K.K., Vlieg J.K. & Marks J.C. (2007) Rapid

responses of decomposers to flow restoration in Fossil Creek, Arizona, USA.

*in preparation.*

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.

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. 3pp. Available at http://www.eri.nau.edu.

Muehlbauer, J.D. (2004) Bridges, Beer Cans, and Bulldozers: In Search of Answers along

Abbey’s Road. *A Celebration of Ideas,* NAU Honors Publication Fall 2004: 14 pp.

Muehlbauer, J.D. (2004) Superhumans: Raskolnikov, Meursault, Napoleon, and Beyond. *A*

*Celebration of Ideas,* NAU Honors Publication Spring 2004: 10-12.

**PRESENTATIONS**

*Short-term effects of dam decommissioning and flow restoration in Fossil Creek.* (Oral Presentation)

* Presented at Ecological Society of America (ESA)/Society for Ecological Restoration (SER) Joint Conference; San Jose, CA 8/2007.

*Short-term effects of diversion dam decommissioning and flow restoration on decomposition, fungal biomass, and the macroinvertebrate community in Fossil Creek, AZ, USA.* (Poster)

* Presented at Undergraduate Research and Design Day; NAU, Flagstaff, AZ 4/2007.

*Diversion Dam Reduces Decomposition, Fungal Biomass and Macroinvertebrate Abundance and Diversity*. (Poster)

* Presented at North American Benthological Society (NABS)/American Geophysicists Union (AGU) Joint Conference; New Orleans, LA 5/2005.
* Presented at Undergraduate Research & Design Day; NAU, Flagstaff, AZ 4/2005.
* Presented at Undergraduate Showcase; NAU, Flagstaff, AZ 10/2005.

*Bridges, Beer Cans, and Bulldozers: In Search of Answers along Abbey’s Road* (Oral Presentation)

* + Presented at Fall Honors Symposium; NAU, Flagstaff, AZ 10/2004.

*Superhumans: Raskolnikov, Meursault, Napoleon, and Beyond* (Oral Presentation)

* + Presented at Spring Honors Symposium; NAU, Flagstaff, AZ 4/2004.

**TEACHING**

*“HON 399: Beyond the Bachelors.”* NAU, Flagstaff, AZ 1/2006-5/2007.

* Honors class for students considering graduate school
* Assisted with course creation process: Syllabus/schedule planning
* Designed, supervised, and maintained online (Blackboard) class component
* Served as Teaching Assistant.

**PROFESSIONAL AFFILIATIONS**

*Member, Ecological Society of America (ESA)*, 2005-Present

*Member, Society for Ecological Restoration (SER)*, 2005-Present

*Member, American Geophysicists Union (AGU),* 2007-Present

*Member, Honor Society of Phi Kappa Phi*, 2005-Present

*President & Vice President, Student Affiliates of the American Chemical Society (SAACS)*

* Organized meetings and recruitment, planned service activities and professional development opportunities, 2003-2007.

**COMMUNITY INVOLVEMENT**

*Eagle Scout & Assistant Scoutmaster, Boy Scouts of America (BSA)*, 1991-2007

* Mentored and instructed scouts in outdoor skills and character building.

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

* Directed students in environmental lobbying events and adventure outings.

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

* Facilitated planning and coordination of campus-wide Earth Day celebration.

*Captain, Canon International Envirothon*, 2002-2003

* Led a student team that won first place in the aquatics section internationally.

*Volunteer, The Nature Conservancy*, 2002-2005

* Assisted with service and ecological projects at Hart Prairie Nature Preserve.

**AWARDS & RECOGNITIONS**

*Pogue Fellow*, UNC, 8/2007-Present

* Five-year fellowship as part of the University Fellows program.

*Gold Axe Award*, NAU, 4/2007

* University-wide award given to seniors who have exhibited strong scholastic achievement and extracurricular/community involvement while at NAU.

*Bayless Biology Scholarship*, NAU, 4/2007

* + Biology departmental scholarship awarded for completing a significant research project that is in preparation for publication in a peer-reviewed journal and presentation at a national conference.

*Senior Scholastic Award*, NAU, 4/2007

* + Biology Departmental award given to senior student with the highest GPA.

*Senior Scholar Award*, NAU, 4/2007

* + - Chemistry departmental award given to a senior student with strong scholastic achievement who has made a significant contribution to the Chemistry Department.

*Raymond Scoutmaster Scholarship*, NAU, 4/2006

* + - University-wide scholarship given to an NAU student who is active with the Boy Scouts of America.

*Kirk Smith Scholarship*, NAU, 4/2005

* + - Awarded by the Ecological Restoration Institute to outstanding Undergraduate Research Assistants.

*Provost’s Scholarship*, NAU, 8/2003-5/2007

* + - Four-year scholarship awarded to NAU students who graduated in the top two percent of their high school classes.

*Exchange Club Chapter and Regional Scholarships*, 5/2003 and 7/2003

* + - Scholarship given to the winner of chapter and region-wide essay competition on American patriotism.