

Curriculum Vitae - January 29, 2010

RACHEL LANELLE MALISON (WILKINSON)

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EDUCATION:

The University of Montana, Missoula, MT. 2008-Present. Ph.D. Organismal Biology and Ecology. Expected Completion, Spring 2012.

Idaho State University, Department of Biological Sciences, Pocatello, ID. 2005-2008. M.S. Ecology.

The University of Montana, Department of Biological Sciences, Missoula, Montana. B.A. Biology, 2004. 3.91 G.P.A., Davidson Honors College Graduate.

RESEARCH EXPERIENCE:

Graduate and Undergraduate Research Experience:

Graduate Research Assistant (2008-Present). Flathead Lake Biological Station, Division of Biological Sciences, The University of Montana. PhD study of the influence of beaver (*Castor canadensis*) as modifiers of salmonid habitat and production in a large floodplain river in western Alaska. Dr. Jack Stanford, advisor.

Graduate Research Assistant (2005-2008). Stream Ecology Center, Department of Biological Sciences, Idaho State University. M.S. study of aquatic-terrestrial connectivity in a wilderness watershed. Organized and conducted study in the Frank Church 'River of No Return' Wilderness to evaluate the potential influences of wildfire on the flux of emerging adult insects from streams to riparian areas, and the consequences for terrestrial predators such as spiders and bats that depend on this prey subsidy. Work involved sampling of periphyton, benthic invertebrates and night surveys of spiders and bats in stream and riparian ecosystems. Designed and constructed a new floating emergence trap for collection of emerging stream insects, identified larval and adult aquatic insects to family, genus or species. Dr. Colden Baxter, advisor.

Undergraduate Research Field Assistant (2004). Assisted with the Salmonid Rivers Observatory Network project in the Kitlope Heritage Preserve, British Columbia, Canada. Work involved surveys of juvenile salmon, collection of samples for stable isotope food-web analysis, and collection of general habitat data. Dr. Jack Stanford, advisor.

Undergraduate Independent Study Research Experience (2004). Department of Biological Sciences, University of Montana. Performed diet analyses of lake whitefish, *Coregonus clupeaformis*, from Flathead Lake. Work involved dissection of fish, and identification and counts of stomach contents. Dr. Lisa Eby, advisor.

Undergraduate Film Production (2004). Traveled to Ecuador and the Galapagos Islands for three weeks with University of Montana. With footage filmed during the trip we produced the documentary, "Conservation of the Diving Dragons," featuring the island's marine iguanas. Dr. Paul Spruell, advisor.

PUBLICATIONS:

Peer-reviewed publications:

Malison, R.L. and C.V. Baxter. In press. The "fire-pulse:" Wildfire stimulates flux of aquatic prey to terrestrial habitats driving increases in riparian consumers. *Canadian Journal of Fisheries and Aquatic Sciences*.

Malison, R.L. and C.V. Baxter. In press. Streams affected by wildfire of varying severity differ in aquatic insect assemblage structure and emergence. *Journal of the North American Benthological Society*.

Malison, R.L., J. Benjamin, and C.V. Baxter. In press. Measuring adult insect emergence from streams: the influence of trap placement and a comparison with benthic sampling. *Journal of the North American Benthological Society*.

Thesis:

Malison, R.L. Effects of wildfire on aquatic insect assemblages, emerging adult insects, and riparian consumers in a wilderness watershed. M.S. Thesis, Idaho State University, Pocatello, ID.

PAPERS PRESENTED:

Primary presenter:

Malison, R.L., J. Chaffin, and J. A. Stanford (2009). Use of beaver ponds by salmonids in western Alaska. North American Benthological Society, May 21, Grand Rapids, Michigan, USA.

Malison, R.L. and C.V. Baxter (2008). Streams affected by wildfire of varying severity differ in aquatic insect assemblage structure and emergence. North American Benthological Society, May 25-30, Salt Lake City, Utah, USA.

Malison, R.L. (2008). Effects of wildfire on aquatic insect assemblages, emerging adult insects, and riparian consumers in a wilderness watershed. Department of Biological Sciences Thesis Defense, February 19, Idaho State University, Pocatello, USA.

Malison, R.L. and C.V. Baxter (2008). Comparison of Benthic and Emergent Insect Community Composition Affected by Wildfires of Varying Burn Severities. American Fisheries Society, February 7, Post Falls, Idaho, USA

Malison, R.L. and C.V. Baxter (2007). The "fire pulse:" Effects of wildfire on periphyton, benthos, insect emergence, and riparian predators in a wilderness watershed. Intermountain Conference on the Environment, Idaho State University, Pocatello, Idaho, USA. September 18-19, 2007.

Wilkinson, R.L. and C.V. Baxter (2007). The "fire pulse:" Effects of wildfire on periphyton, benthos, insect emergence, and riparian predators in a wilderness watershed. North American Benthological Society, June 5, Columbia, South Carolina, USA.

Wilkinson, R.L. and C.V. Baxter (2007). Aquatic-terrestrial connectivity in a wilderness watershed: Do emerging insects and riparian predators increase following wildfire? American Fisheries Society, February 22, Boise, Idaho, USA.

Wilkinson, R.L. and C.V. Baxter (2006). Aquatic-terrestrial connectivity in a wilderness watershed: Do emerging insects and riparian predators increase following wildfire? North American Benthological Society, June 8, Anchorage, Alaska, USA.

Wilkinson, R.L. (2006). Aquatic-terrestrial connectivity in a wilderness watershed: Do emerging stream insects fuel riparian food webs following wildfire? Departmental of Biological Sciences Proposal Seminar, February 2, Idaho State University, Pocatello, ID, USA.

Wilkinson, R.L. (2004). Galapagos Film Festival, Missoula, Montana. Presentation of documentary film, "Conservation of the Diving Dragons."

Co-authored presentations:

Jackson, B., M. Sullivan, and **R.L. Wilkinson** (2007). Impacts of wildfire on riparian plant communities and stream food webs in a wilderness setting. Ecological Society of America, August 5-10, San Jose, California, USA.

Baxter, C.V., **R.L. Wilkinson**, P. Della Croce, J.H. Braatne, G.W. Minshall, and C.E. Torgersen. (2007). Pattern and process in a Central Idaho wilderness riverscape: land-water linkages and the fire pulse. Invited presentation at Symposium "Landscapes to Riverscapes: Bridging the Gaps Between Research and Management of Stream Taxa and Their Ecosystems," University of Idaho, Moscow, Idaho. May 15-16, 2007.

Beck, J., **R.L. Wilkinson**, and C.V. Baxter. (2005). Burned areas are visited by more bats than unburned areas. North American Symposium On Bat Research, October 21, Sacramento, California, USA.

Beck, J., **R.L. Wilkinson**, and C.V. Baxter. (2005). Burned areas are visited by more bats than unburned areas. Intermountain Conference on the Environment, September 13, Idaho State University, Pocatello, ID, USA.

UNIVERSITY SERVICE

Committee Member (2005-2007). Biology Graduate Student Association, Department of Biological Sciences, Idaho State University, Treasurer (2005-2006).

COMMUNITY SERVICE

Committee Member (1998-2008). Rocky Mountain Elk Foundation, Selkirk Crest and Southeast Idaho Chapter Committees, Idaho. Main duties include assisting with preparation and operation of annual banquet.

Riverfest (2006). Pocatello Greenway Riverfest, Idaho. Volunteered with the ISU Stream Ecology Center, teaching children and adults about stream ecology.

Community Environmental Fair (2006-2007). Pocatello, Idaho. Volunteered with the ISU Stream Ecology Center to teach children and adults about stream ecology and aquatic insects living in the Portneuf River.

Classroom Instructor and Festival Assistant (2003). Clark Fork Watershed Festival, Community Watershed Education Experience, University of Montana, Missoula, Montana. Participated in a semester-long community watershed class, conducted classroom visits with 6th graders, and served as a guide for the Watershed Festival on May 1st, 2003.

Montana Science Fair Judge (2003, 2004). Judged biological science projects for the Montana Science Fair.

GRANTS RECEIVED

ISU, Department of Biological Sciences. Spring 2008. R.L. Malison and C.V. Baxter. \$500.
ISU, Office of Research. Spring 2007. R.L. Wilkinson and C.V. Baxter. \$100.
ISU, Biological Graduate Student Association. Spring 2007. R.L. Wilkinson and C.V. Baxter. \$200.
ISU, Department of Biological Sciences. Spring 2007. R.L. Wilkinson and C.V. Baxter. \$500.
ISU, Department of Biological Sciences. Fall 2006. R.L. Wilkinson and C.V. Baxter. \$500.
ISU, Graduate Student Research and Scholarship Committee. Dissemination Grant. Fall 2006. R.L. Wilkinson and C.V. Baxter. \$500.
ISU, Department of Biological Sciences. Spring 2006. R.L. Wilkinson and C.V. Baxter. \$500.
ISU, Biological Graduate Student Association. 2006. R.L. Wilkinson and C.V. Baxter. \$200.
ISU, Office of Research. 2006. R.L. Wilkinson and C.V. Baxter. \$150.
ISU, Graduate Student Research and Scholarship Committee. Research Grant. Fall 2006. R.L. Wilkinson and C.V. Baxter. \$1000.
ISU, Department of Biological Sciences. Fall 2005. R.L. Wilkinson and C.V. Baxter. \$500.

HONORS AND HONOR SOCIETIES

North American Benthological Society 2007 Presidents Award

Scholar of the College of Arts and Sciences, University of Montana (2002-2004).

Penetralia Chapter of Mortar Board, Social Chair, University of Montana, Missoula, Montana (2003-2004).

The Honor Society of Phi Kappa Phi (2004)

Alpha Lambda Delta National Honor Society (2002)

National Society of Collegiate Scholars (2002)

Dean's List 2002-2004

The National Dean's List

PROFESSIONAL AFFILIATIONS

American Fisheries Society – ISU Portneuf River Student Chapter Secretary (2005-2006)

Ecological Society of America

North American Benthological Society