CURRICULUM VITAE for J. Ryan Bellmore

June 3rd, 2015

US Geological Survey
3200 SW Jefferson Way, Corvallis, OR 97331
Email: jbellmore@usgs.gov, Ph: (541) 729-6374

EDUCATION

Ph.D., Biology, Idaho State University, Pocatello, Idaho
Received: December 2011
Advisor: Colden V. Baxter
GPA: 3.94

B.S., Fisheries Science, Oregon State University, Corvallis, Oregon
Received: June 2004
GPA: 3.93

AREAS OF EXPERTISE

Fish ecology/biology, stream/aquatic ecology, fisheries management, restoration ecology, structured decision making, ecosystem ecology, riparian-aquatic linkages, aquatic invertebrate ecology and taxonomy, food webs, stable isotopes, predator-prey dynamics, system dynamics modeling, invasive species

EXPERIENCE

Ecologist*,* March 2014 – Present
Forest and Rangeland Ecosystem Science Center, US Geological Survey, Corvallis, Oregon

Fellow, October 2014 – Present
US Geological Survey, Powell Center

Fishery Biologist*,* May 2011 – March 2014
Columbia River Research Laboratory, US Geological Survey, Cook, Washington

Research Assistant, April 2006 to May 2011
Department of Biological Sciences, Idaho State University, Pocatello, Idaho

Fisheries Biologist, February 2005 – February 2006
US Geological Survey, Klamath Falls, Oregon

Fisheries Technician, June – Sept. 2004
Crater Lake National Park, Crater Lake, Oregon

Aquatic Ecology Technician, June – Sept 2003
Bureau of Land Management, Corvallis, Oregon

Stream Ecology Technician, June – Sept. 2002
Department of Fisheries and Wildlife, Oregon State University, Corvallis,

Wildlife Intern, June – Sept 2001
Weyerhaeuser Corporation, Springfield, Oregon

Undergraduate Research Assistant, September 2000 – May 2001
Department of Fisheries and Wildlife, Oregon State University, Corvallis, Oregon

PEER REVIEWED PUBLICATIONS

Bellmore JR, Baxter CV, Connolly PJ. (2015). Spatial complexity reduces interaction strengths in the meta-food web of a river floodplain mosaic. Ecology 96:274-283.

Bellmore JR, Fremier A, Mejia F, Newsom M. (2014). The response of stream periphyton to Pacific salmon: using a model to understand the role of environmental context. Freshwater Biology 59:1437-1451.

Bellmore JR, Baxter CV. (2014). Effects of geomorphic process domains on the structure and function of aquatic ecosystems: a comparison of floodplain and confined river segments. River Research and Applications 30:617-630.

Bellmore JR, Baxter CV, Connolly PJ, Martens K (2013). The floodplain food web mosaic: a study of its importance to salmon and steelhead with implications for their recovery. Ecological Applications 23:189-207.

Bellmore JR, Baxter CV, Ray A, Tardy K, Denny L, Galloway E (2012). Assessing the potential for salmon recovery via floodplain restoration: a multitrophic level comparison of dredge-mined to reference segments. Environmental Management 49:734-750.

Shields BA, Groves KL, Rombaugh C, Bellmore JR (2002). Ligulosis associated with mortality in largescale suckers. Journal of Fish Biology 61:448-455.

IN REVEIW PUBLICATIONS

Benjamin JR, Bellmore JR, Eger GA. (*In review*). Response of whole-stream metabolism to low densities of spawning salmon and implications for nutrient enrichment studies. Target Journal: Freshwater Biology

IN PREP PUBLICATIONS

Bellmore JR, Newsom M, Fremier A. (*In prep*). Using simple food web models to guide structured decision making for river restoration. Target Journal: Ecological Modelling

Bellmore JR, Duda J, Vittum K, Greene S, Torgersen C, Collins M, Craig L, McClain S. (*In prep*). Breaking down barriers: a retrospective look at two decades of dam removal science. Target Journal: Frontiers in Ecology

Collins M, Tullos D, Bountry J, Randle T, Wilcox A, Connolly P, Bellmore JR. (*In prep*). Seven common concerns of dam removal engineering and management: What do 14 years of monitoring data tell us? Target Journal: Water Resources Research

O'Connor J, Grant G, East A, Major J, Duda J, Bellmore JR, Shafroth P, Anderson C, Pess G. (*In prep*). Lessons from undamming rivers: A 20 year perspective. Target Journal: Bioscience

Penaluna BE, Olson DH, Flitcroft RL, Weber M, Bellmore JR, Wondzell SM, Dunham JB, Johnson SL, Reeves GH. (In prep). Seeing the forest for its aquatic biodiversity: a weak link in ecological and ecosystem service resilience.

DISSERTATION

Bellmore JR (2011). The ecological importance of floodplains in montane river networks: implications for habitat restoration and salmon recovery. Doctoral Dissertation. Idaho State University, Pocatello, Idaho.

REPORTS

Bellmore JR, Vittum K, Duda J, Greene S (2015). USGS Dam Removal Science Database. doi:10.5066/F7K935KT.

Zabel R, Bellmore JR, and 33 other authors. (2013) Life-cycle models of salmonid populations in the interior Columbia River Basin. NOAA Fisheries.

Bellmore JR, Baxter CV (2009). Yankee Fork Salmon River Dredged Tailings Restoration Project: A plan for monitoring and evaluation. Prepared for the Shoshone Bannock Tribes.

Bellmore JR, Baxter CV (2009). Yankee Fork Dredge Tailings Restoration Project: An assessment of the potential for salmon and steelhead recovery via floodplain

restoration in the Yankee Fork Salmon River, Idaho. Prepared for the Shoshone Bannock Tribes.

INVITED PRESENTATIONS (first author invited presentations only)

Bellmore JR (2015). Spatial complexity and floodplain food webs: the importance of nature's messiness. Invited seminar presented at NOAA Fisheries Science Center, Seattle, March 2, 2015

Bellmore JR (2014). Exploring responses to restoration using simple food chain models. Invited seminar: Center for Ecohydraulics Research, University of Idaho, Boise, October 23, 2014.

Bellmore JR, Fremier A, Mejia F, Newsom M (2013). Periphyton and Pacific Salmon: Understanding the connection by modeling the linkages. Invited seminar presented at Oregon State University, June 3, 2013.

Bellmore JR, Fremier A, Mejia F, Newsom M (2013). Periphyton and Pacific Salmon: Understanding the connection by modeling the linkages. Invited presentation in special symposium entitled, "Silver bullet or so much fertilizer? Synthesis and dialogue regarding the science and management of nutrient amendments as mitigation tools," Annual Meeting, Western Division of the American Fisheries Society, April 16-20, 2013, Boise, Idaho.

Bellmore JR, Baxter CV, Connolly PJ (2013). Linking fishes to their food via estimates of secondary invertebrate production. Invited presentation in special symposium entitled, "Linking macroinvertebrates to fish habitat quality," Annual Meeting, Oregon Chapter of the American Fisheries Society, February 19-22, 2013, Bend, Oregon.

Bellmore JR, Baxter CV, Connolly PJ, Martens K (2012). The floodplain food web mosaic: a study of its importance to stream fishes, with implications for habitat restoration and community stability. Invited seminar presented at Oregon State University, May 21, 2012.

PRESENTATIONS

Mejia FH, Benjamin J, Bellmore JR, Zuckerman A, Watson G, Newsom M, Fremier AK (2015). Whole stream metabolism in a nutrient limited montane river network. Society for Freshwater Science Annual Meeting, May 17-21, Milwaukee, Wisconsin.

Bellmore JR, Dunham J (2015). Application of system dynamics models for natural resource management: Leveraging the power of systems thinking. Malheur Wildlife Refuge stakeholder meeting, February 3, 2015, Corvallis, Oregon.

Bellmore JR, Newsom M, Fremier A, Connolly P (2014). Incorporating food webs into salmon recovery science: a modeling approach. Joint Aquatic Sciences Meeting, May 18-23, 2014, Portland, Oregon.

Baxter CV, Cross WF, Bellmore JR, Rosi-Marshall EJ, Hall RO, Kennedy TE (2014). Anticipating responses of stream food webs to dam removal: insights from theory and empirical studies of dammed and free-flowing rivers. Joint Aquatic Sciences Meeting, May 18-23, 2014, Portland, Oregon.

Zuckerman A, Fremier AK, Bellmore JR, Mejia FH (2014). Terrestrial carbon dynamics, aquatic food webs, and implications for ecosystem restoration. Joint Aquatic Sciences Meeting, May 18-23, 2014, Portland, Oregon.

Mejia FH, Baxter CV, Fremier AK, Bellmore JR, Berntsen EK (2014). Effects of hyporheic exchange on the growth of post-emergent Chinook salmon in winter and early spring. Joint Aquatic Sciences Meeting, May 18-23, 2014, Portland, Oregon.

Bellmore JR, Newsom M, Fremier A, Connolly P, Jorgensen J (2013). The Trophic Productivity Model: Incorporating food webs into salmon recovery science. Upper Columbia Science Conference, November 13-14, 2013, Wenatchee, Washington.

Newsom M, Fremier A, Rentmeester S, Bellmore JR (2013). Using a model to specify data acquisition requirements. Upper Columbia Science Conference, November 13-14, 2013, Wenatchee, Washington.

Jorgensen J, Bellmore JR (2013). Using aquatic food webs to evaluate in-stream restoration treatments. Upper Columbia Science Conference, November 13-14, 2013, Wenatchee, Washington.

Newsom M, Bellmore JR, Fremier A, Connolly PJ (2013). Using an explanatory model to explore freshwater food webs and salmon carrying capacity. Invited presentation in special symposium entitled, “Advancing techniques for modeling salmonid life cycles and population production: considerations and case studies,” Annual Meeting, Western Division of the American Fisheries Society, April 16-20, 2013, Boise, Idaho.

Bellmore JR, Baxter CV, Connolly PJ (2012). Influence of landscape complexity on the strength of predator-prey interactions. Ecological Society of America, August 8, 2012, Portland, Oregon.

Bellmore JR, Baxter CV, Connolly PJ, Martens K (2012). The floodplain food web mosaic: A study of its importance to Pacific salmon, with implications for their restoration. Oregon Chapter American Fisheries Society, February 28 to March 2, 2012.

Bellmore JR, Baxter CV, Connolly PJ, Martens K (2012). The floodplain food web mosaic: a study of its importance to stream fishes, with implications for habitat restoration and community stability. Seminar presented at the Columbia River Research Laboratory, January 19, 2012.

Bellmore JR, Baxter CV, Connolly PJ, Martens K (2011). Combining food web and ecosystem techniques to evaluate the potential for salmon and steelhead habitat restoration. National American Fisheries Society Annual Meeting, September 4-8. Seattle, WA, USA.

Bellmore JR, Baxter CV (2010). A production budget analysis of floodplain restoration potential in the Salmon River basin, Idaho. Annual Meeting of the North American Benthological Society, June 6-11. Santa Fe, New Mexico, USA.

Lueders-Dumont J, Bellmore JR, Baxter CV (2010). Hydrologic connectivity and benthic invertebrate communities: A comparison of main channel and side channel habitats in a river-floodplain. Annual Meeting of the North American Benthological Society, June 6-11. Santa Fe, New Mexico, USA.

Bellmore JR, Baxter CV (2010). The Function of Floodplain vs. Confined Segments in an Idaho River Network: Organic Matter Dynamics and Invertebrate Production. 2010 Annual Meeting of the Idaho Chapter American Fisheries Society, March 3-5. Pocatello, Idaho, USA.

Bellmore JR, Baxter CV, Tardy K, Denny L (2009). Testing assumptions behind alternative recovery strategies for anadromous salmonids: An analysis of food limitation in the upper Salmon Basin, Idaho. Annual Meeting of the North American Benthological Society, May 16-23. Grand Rapids, Michigan, USA.

Bellmore JR, Baxter CV, Tardy K, Denny L (2009). Testing assumptions behind alternative recovery strategies for anadromous salmonids: An analysis of food limitation in the upper Salmon Basin, Idaho. 2009 Annual Meeting of the Idaho Chapter American Fisheries Society, March 4-6. Boise, Idaho, USA.

Bellmore JR, Baxter CV, Ray AM (2008). Sources and retention of organic matter in a river network: The function of floodplain vs. confined segments. 56th Annual Meeting of the North American Benthological Society, May 25-29. Salt Lake City, Utah, USA.

Bellmore JR, Baxter CV, Ray AM (2008). Sources and retention of organic matter in a river network: The function of floodplain vs. confined segments. 2008 Annual Meeting of the Western Division American Fisheries Society, May 4-8. Portland, Oregon, USA.

Bellmore JR, Baxter CV, Ray AM (2008). Floodplain contributions to basal resources and retention in montane rivers: Comparison of dredge-mined to reference segments. 2008 Annual Meeting of the Idaho Chapter American Fisheries Society, February 6-8. Post Falls, Idaho, USA.

Bellmore JR, Baxter CV, Ray AM (2007). Floodplain contributions to basal resources and retention in montane rivers: Comparison of dredge-mined to reference segments. Annual Meeting of the North American Benthological Society, June 3-7. Columbia, SC, USA.

GRADUATE STUDENT COMMITTEES

Francine Mejia	Ph.D. Student, University of Idaho	2012-present
James Pearson	Masters Student, Oregon State University	2015-present
Dave Roon	Ph.D. Student, Oregon State University	2015-present

GRANTS

National Dam Removal Database: A Living Database for Information on Dying Dams. 2015-2016. US Geological Survey Community for Data Integration. Principal Investigators: Jeff Duda, Ryan Bellmore, Jon Warrick, Sky Bristol, Daniel Weiferich. $47,000

Aquatic Food Web and Salmon Life-Cycle Modeling. 2014-2017. US Bureau of Reclamation. Principal Investigators: Ryan Bellmore, Joseph Benjamin and Jason Dunham. $635,000

Dam Removal: Synthesis of Ecological and Physical Responses. 2014-2015. US Geological Survey Powell Center. Principal Investigators: Jim O'Connor, Jeff Duda, Amy East, Chauncey Anderson, Ryan Bellmore. $83,000

Aquatic Food Web Modeling Project. 2011-2014. US Bureau of Reclamation. Principal Investigators: Pat Connolly, Ryan Bellmore. $613,000

Investigating the Effects of Salmon on Stream Metabolism. 2011-2012. US Bureau of Reclamation. Principal Investigators: Joseph Benjamin and Ryan Bellmore $177,000

Methow River Floodplain Restoration Project: Evaluation of the Factors Limiting Fish Production and Potential Responses to Restoration. US Geological Survey. Principal Investigators: Colden Baxter, Ryan Bellmore, Pat Connolly. $172,000

AWARDS, SCHOLARSHIPS AND HONORS

2010 Best student paper, Idaho Chapter American Fisheries Society
2009 Conservation Research Award, North American Benthological Society $1,000
2008 William Trachtenberg Memorial Scholarship, Western Division American Fisheries Society $600
2008 Graduate Student Scholarship, Idaho Chapter American Fisheries Society $1,000
2008 Best Student Paper, Idaho Chapter American Fisheries Society Annual Meeting
2008 Department of Biological Sciences Student Grant, Idaho State University $500
2007 Department of Biological Sciences Student Grant, Idaho State University $500
2007 Graduate Student Research and Scholarship Committee Grant, Idaho State University Office of Research $1,500
2000 – 2004 Oregon State Diversity Scholarship, Oregon State University
2000 – 2004 Agricultural Honors Scholarship, Oregon State University

PROFESSIONAL MEMBERSHIPS

American Fisheries Society, 2001– Present
Society for Freshwater Science (*North American Benthological Society*), 2007 – Present
Ecological Society of America, 2012 – Present

PROFESSIONAL ACTIVITIES

***Outreach Coordinator**,* June 2008 – June 2009, Portneuf Student Subunit American Fisheries Society

***President**,* June 2007 – June 2008, Portneuf Student Subunit American Fisheries Society

Vice President, 2001 – 2002, Oregon State University Student Subunit American Fisheries Society

Student Liaison, 2001 – 2002 & 2003 – 2004, Served as liaison between Oregon State University Subunit American Fisheries Society and Oregon Chapter AFS