

Sarah Linfield Brown Lewis

Faculty Research Assistant, Department of Geosciences, Oregon State University, Corvallis, Oregon

Education

MS, 1999, Geology, University of Vermont, Burlington, Vermont

BS *cum laude*, 1996, Geological Sciences, Tufts University, Medford, Massachusetts

Professional Experience

10/01-present	Faculty Research Assistant	Dept. of Geosciences, Oregon State University, Corvallis
6/05 – 5/07	Instructor	Willamette Valley Watershed Partnership Project, Oregon
3/99 - 1/01	Project Geologist	Terrasearch, Inc., San Jose, California
8/98 - 10/98	Staff Scientist Intern	Stone Environmental, Inc., Montpelier, Vermont
1/98 & 7/98	Field Researcher	USGS, Earthquake Hazards Group, Coastal Washington
7/97 - 8/97	Summer Field Intern	NAGT/USGS, Earthquake Hazards Group, Pacific Northwest

Grants Received

2007 - 2008 Nolin, A, Jefferson A. & **Lewis S.** Contributions of Glacier Melt to Upper Hood River Streamflow and Implications of Climate Change. Funded by Institute for Water and Watersheds, Oregon State University. \$30,092.

2005 - 2008 Grant, G., Jefferson, A, **Lewis, S.** & Tague, C. Discharge, source areas, and water ages of spring-fed streams and implications for water management in the McKenzie River Basin. Funded by Eugene Water and Electric Board. \$60,000.

2005 - 2006 Grant, G., Cissel, J., Lancaster, S., McDonnell, J., Swanson, F., & **Lewis, S.** Forest Management effects on peak storm flows and consequent effects on stream channel morphology – science synthesis and management interpretations. Funded by BLM sponsored CESU Research Project. \$20,474.

2005 Grant, G., & **Lewis S.** Potential Effects of Gravel Augmentation on Temperature in the Clackamas River Oregon: A Targeted Literature Review. Funded by Portland General Electric. \$3,000.

Publications

Grant, G.E., **Lewis, S.I.**, Swanson, F. & McDonnell, J., *in press*. Effects of forest practices on peakflows and consequent channel response in western Oregon: a state-of-science report, for publication as a USDA Forest Service General Technical Report.

Jefferson, A., Nolin, A., **Lewis, S.**, and Tague, C., *in press*. Hydrogeologic controls on streamflow sensitivity to climatic variability, Hydrological Processes.

Jefferson, A., Grant, G., and **Lewis, S.**, 2007. A river runs underneath it: geological control of spring and channel systems and management implications, Cascade Range, Oregon. In M.J. Furniss, C.F. Clifton, and K.L. Ronnenberg, eds. Advancing the Fundamental Sciences: proceedings of the Forest Service national earth sciences conference. PNW-GTR-689. Portland, OR: U.S.D.A. Forest Service, PNW Research Station. p391-400.

Tague, C., Farrell, M., Grant, G. **Lewis, S.** and Rey, S. 2007. Hydrogeologic controls on summer stream temperatures in the McKenzie River basin, Oregon, Hydrologic Processes 21: 3288–3300.

Lewis S.L., Grant, G.E., and Stewart, G. 2005. Literature Review of Possible Effects of Gravel Augmentation on Stream Temperature. Report prepared for Portland General Electric, dated March 7, 2005.

Grant, G.E., Schmidt, J.C. and **Lewis, S.L.** 2003. A Geological Framework for Interpreting Downstream Effects of Dams on Rivers in J.E. O'Connor and G.E. Grant eds. A Peculiar River. American Geophysical Union, p209-225.

Grant, G.E., **Lewis, S.L.** and Kast, P., 2002. Sediment Mass Balance for Cougar Reservoir Sediment Releases. Report prepared for U.S. Army Corps of Engineers, Portland District Office, dated November 5, 2002.

Stewart, G., Glasmann, J.R., Grant, G.E., **Lewis, S.L.** and Ninneman, J., 2002. Evaluation of Fine Sediment Intrusion into Salmon Spawning Gravels as Related to Cougar Reservoir Sediment Releases. Report prepared for U.S. Army Corps of Engineers, Portland District Office, dated October 4, 2002.

Brown, S.L., Bierman, P.R., Lini, A., Davis, P.T. and Southon, J., 2002. Lake cores as archives of Holocene watershed erosion events: *Journal of Paleolimnology*, v.28, no.2 p.219-236.

Bierman, P. R., **S. Brown**, et al. 2001. Post-glacial Surface Processes of northern New England. GSA Field Trip Guide, Boston 2001.

Benson, B.E., Atwater, B.F., Yamaguchi, D.K., Amidon, L.J., **Brown, S.L.**, and Lewis, R.C., 2001. Renewal of tidal forests in Washington state after a subduction earthquake in A.D. 1700: *Quaternary Research*, v. 56, no. 2, p.139-147.

Brown, S.L., Bierman, P.R., Lini, A., and Southon, J., 2000. 10 000 yr record of extreme hydrologic events: *Geology*, v.28, p.335-338.

Ridge, J.C., Besonen, M.R., Brochu, M., **Brown, S.**, Callahan, J.W., Cook, G.J., Nicholson, R.S., and Toll, N.J., 1999. Varve, paleomagnetic, and ¹⁴C chronologies for late Pleistocene events in New Hampshire and Vermont: *Geographie physique et Quaternaire*, v. 53, p.79-106.

Abstracts

Jefferson, A., *Grant, G., Lewis, S. December 10, 2007. Drainage Density: A Framework for Predicting Peak and Low Flows in Ungaged Catchments. American Geophysical Union Fall Meeting, San Francisco, CA. Published as *Eos Trans. AGU* 88 (52), Fall Meeting Suppl., Abstract H13M-07.

Grant, G., Jefferson, A., O'Connor, J. and Lewis, S. Drainage density integrates geology and climate, reflects landscape evolution, and constrains paleoflood magnitudes, 4th International Paleoflood Workshop, 2007.

Grant, G., Jefferson, A., Lewis, S. Is Geology Destiny? A geologic framework for predicting streamflows in ungaged catchments. USA Pub (Prediction in Ungaged Basins) Workshop 2006.

Jefferson, A., Nolin, A., Lewis, S., Payne, M., and Grant, G. Climate variability, snowmelt distribution, and effects on streamflow in a Cascades watershed, Eastern Snow Conference, 2006.

Grant, G., O'Connor, J., Wampler, P., Lancaster, S., Jefferson, A., and Lewis, S., Geological controls on the abundance of gravel in rivers, *Gravel Bed Rivers* 6, 2005.

Jefferson, A., Grant, G., Lewis, S., and Tague, C., Geology broadly predicts summer streamflow in volcanic terrains: lessons from the Oregon Cascades, AGU Fall Meeting, 2004.

Farrell, M.J., Tague, C., Grant, G.E., Jefferson, A., Lewis, S.L., The impact of geologic heterogeneity on stream temperatures in the McKenzie River, Oregon: implications for climate change and land use, AGU Joint Assembly, 2004.

Grant, G., Jefferson, A., O'Connor, J.E., Tague, C., Lewis, S., and Haluska, T.L., Drainage network evolution in volcanic landscapes: how much time does it take to get the river flowing?, GSA Annual Meeting, 2003.

Grant, G.E. and Lewis, S.L., 2003. Effects of changing flow regime on channel morphology, sediment transport, and grain size: rethinking what we know. Instream Flow Workshop, Seattle, Washington.

Grant, G.E., Stewart, G., Bromley, C., Lewis, S. and Kast, P., 2003. Perspectives on science and policy issues underlying dam removal: How much do we really know? AAAS Annual Meeting, Denver, Colorado

Grant, G.E., Lewis, S.L. and O'Connor, J.E., 2002. Magic Carpets and Dirty Snowballs: An ontology of geophysical disturbance. AGU Fall Meeting, San Francisco, California.

Grant, G.E., Tague, C., Lewis, S.L., Farrell, M. and Kast, P., 2002. Geologic control of the peak and low flow regimes of the Willamette River and tributaries, Oregon. AIH Annual Meeting, Portland, Oregon

Grant, G.E., Tague, C. and Lewis, S.L. 2002. The source of the river: Geologic control of the hydrologic regime, Willamette River, Oregon. GSA Cordilleran Section Meeting, Corvallis, Oregon

Grant, G.E., Stewart, G., Bromley, C., Lewis, S. and Kast, P. 2002 "Deconstructing Rivers: the ecologic, geomorphic and social consequences of dam removal. ASLO Annual Meeting, Victoria, British Columbia

Grant, G.E., Hayes, S.K., and Lewis, S., 2002, "Disentangling the effects of peak flow and sediment production increases due to timber harvest" Symposium on Small Channel and their Riparian Zones, Forestry Continuing Studies Network of British Columbia, Vancouver, British Columbia

Brown, S.L., Bierman, P.R., Mehrrens, C.J., and Lini, A., 1998, Terrigenous layers in lake cores document fluctuations in New England's Holocene climate: GSA Abstracts with Programs, v.30, p.A-114.

Brown, S.L., Bierman, P.R., Mehrrens, C.J., and Lini, A., 1997, Episodic inputs of terrestrial sediment to a post-glacial mountain lake: GSA Abstracts with Programs, v.29, p.A-36.

Professional Service & Memberships

Manuscript reviewer for Hydrological Processes, 2006 - present

Geological Society of America, 1997 - present

Honors & Accomplishments

Received the 1998 Howard Award from the Geomorphology and Quaternary Geology Division of the Geological Society of America.

Received the 1998 UVM Geology Department Graduate College Teaching Fellow of the Year Award.

Awarded MS research grants from UVM Graduate College (Summer 1998), the Geological Society of America (Spring 1998), Sigma Xi (Spring 1998), and the Vermont Geological Society (Spring 1997).

Attended the University of Indiana Geologic Field Camp (Tobacco Root Mts, Montana) in Summer 1996.
Based on outstanding performance, nominated for NAGT/USGS internship.