

Joel Scheingross
California Institute of Technology
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Education

California Institute of Technology September 2009 – Present
Advisor: Michael Lamb
Dissertation topic: Sediment transport and erosion rates of waterfall plunge pools

University of California, Berkeley August 2003 – December 2007
B.A. Geology
B.S. Environmental Sciences
Thesis topic: The use of species distribution models in determining areas of conservation and measuring the effects of climate change on alpine butterflies.

Research Interests

- Waterfall and knickpoint erosion mechanics
- Sediment transport, bedrock incision, and the role of debris flows in headwater streams
- Controls on deep-seated landsliding occurrence, frequency, and magnitude
- Hillslope channel coupling and the role of hillslopes in landscape evolution

Positions

Junior Specialist, University of California, Berkeley May 2007 – May 2009
I developed several field based projects seeking to understand channel form and processes in mountain landscapes within the South Fork Eel River watershed. These projects include 1) quantifying the amount of sediment transported by fluvial processes in debris flow dominated channels, 2) using cosmogenic isotopes to yield basin wide erosion rates from debris flow fan deposits, and 3) examining the effects of earth flows and deep-seated landslides on channel form and channel head location.

Visiting Student, Monteverde Institute, Costa Rica October – December 2007
I independently carried out a field experiment examining the effect of substrate size on aquatic insect richness, diversity, and biomass in small, undisturbed tropical streams. While in Costa Rica I also studied Spanish and enrolled in tropical biology and ecology courses.

Undergraduate Assistant, National Center for Earth-Surface Dynamics July 2007
I assisted graduate students at the University of Genoa (Italy) with flume based experiments examining the morphodynamics of tidal channels.

Undergraduate Fellow, Oregon State University (NSF Research Experience for Undergraduates) Summer 2006
I designed and implemented a controlled laboratory experiment to examine the effect of variable physical and biological conditions (light, food availability, and water flow) on the vertical position of larval Pacific cod (*Gadus macrocephalus*).

Publications and Presentations

Hurst, T.P., Cooper, D.W., **Scheingross, J.S.**, Seale, E.M., Laurel, B.J., and M.L. Spencer. 2009. Effects of ontogeny, temperature, and light on vertical movements of larval Pacific cod (*Gadus macrocephalus*). *Fisheries Oceanography*, 18, 5, p. 301-311 doi:10.1111/j.1365-2419.2009.00512.x.

Scheingross, J.S., Willenbring, J.K., and W.E. Dietrich, 2008. Erosion Rates and Debris Flow \ History Reconstruction: a Comparison of Carbon and Cosmogenic Nuclide Dating Techniques, EOS Trans. AGU, 89(53), Fall Meet.

Suppl., Abstract H51D-0852.

Winchell, E., **Scheingross, J.**, Dietrich, W.E., and Lamb, M.P., 2008. Fluvial Transport of Gravel in Debris Flow Cut Channels, EOS Trans. AGU, 89(53), Fall Meet. Suppl., Abstract H53C-1076.

Scheingross, J.S., S.D. Schoville, and G.K. Roderick. 2007. The use of species distribution models in determining areas of conservation and measuring the effects of climate change on alpine butterflies. Presented at 92nd annual meeting of Ecological Society of America, August 5 - 10, 2007, San Jose, CA, USA. (Abstract-ESA2007).

Scheingross, J.S., 2007. Predicting species distribution of Sierra Nevada butterflies in response to climate change. Senior Thesis, University of California, Berkeley.

Awards and honors

UC Berkeley, Earth and Planetary Science Department Citation (2007)

Gold medalist, Geolympics, UC Berkeley (2007)

Charles H. Ramsden Research Fellow, UC Berkeley (2007)

References:

Dr. Michael Lamb, mpl@gps.caltech.edu, (626) 395-3612

Dr. William Dietrich, bill@eps.berkeley.edu, (510) 642-2633

Dr. Thomas Hurst, Thomas.Hurst@noaa.gov, (541) 867-0222