

SHARON JAE HALL

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EDUCATION

Ph.D. **University of California, Berkeley**, Department of Soil Science, 1998.
Ed.M. **Harvard University**, Graduate School of Education, 1992.
B.S. **Stanford University**, Department of Biological Sciences, 1990.

HONORS & AWARDS

- Nominated for the Associated Students of ASU Centennial Professorship for excellence in teaching and community service, 2006.
- John D. and Catherine T. MacArthur Professor, The Colorado College, 2003-05.
- Gresham Riley Post-Doctoral Scholar, The Colorado College, 1998-99.
- NASA Earth Systems Science Doctoral Fellow, 1996-1998.
- National Science Foundation Pre-Doctoral Fellow, 1994-1996.
- Ecological Society of America Student Presentation Award, Soil Ecology; Providence, Rhode Island, 1996.
- Doctoral Fellow, Dept. of Soil Science, UC Berkeley, 1993.

POSITIONS HELD

- **Assistant Professor, Ecology, Evolution, and Environmental Science**, School of Life Sciences, Arizona State University, 2005-present.
- **MacArthur Assistant Professor of Environmental Science**, The Colorado College, 2003-2005, and Assistant Professor, 2001-03.
- **Post-Doctoral Research Associate**, Department of Geological Sciences and Environmental Studies, University of Colorado at Boulder, 1999-2001.
- **Visiting Assistant Professor**, Environmental Science, The Colorado College, 1998-2000.

PUBLICATIONS

*Graduate students and **Undergraduates

- Spielmann, K.A., H. Schaafsma*, J. Briggs, **S.J. Hall**, and M. Kruse*. 2009. Legacies on the Landscape: The enduring effects of long-term human-ecosystem interactions. In: M. Nelson, (ed), Movement, Connectivity, and Landscape Change, *Proceedings of the 2008 Southwest Symposium of Archaeology*, Tempe, AZ.
- Hall, S.J.**, P. Marchand, and S. Johnson. 2009. Long-term effects of selective logging on community and ecosystem structure in subalpine forests of the southern Rocky Mountains. *Canadian Journal of Forest Research*, in review.
- Hall, S.J.** and D. Lombardozzi**. 2008. Short-term effects of wildfire on montane stream ecosystems in southern Colorado: 1-2 years post burn. *Western North American Naturalist*, in press.
- Hall, S.J.**, D. Huber, and N.B. Grimm. 2008. Soil N₂O and NO_x emissions from an arid urban ecosystem. *Journal of Geophysical Research-Biogeosciences*, (113) G1, G01016.
- McCrackin, M.L.*, T.K. Harms*, N.B. Grimm, **S.J. Hall**, J.P. Kaye. 2008. Responses of soil microorganisms to resource availability in urban, desert soils. *Biogeochemistry*, (87) 2, 143-155.

- Hall, S.J.** and G.P. Asner. 2007. Biological invasions alter regional N-oxide emissions in Hawaiian rain forests. *Global Change Biology*, (13) 10, 2143-2160.
- Pfirman, S., **S.J. Hall**, and T. Tietenberg. 2005. Environmental programs: Liberal arts colleges and interdisciplinary education. *Environmental Science & Technology*, 39 (10): 221A-224A.
- Hall, S.J.**, G. Asner and K. Kitayama. 2004. Land use, climate, and substrate controls over soil N dynamics and N-oxide emissions in Borneo. *Biogeochemistry*, 70(1): 27-58.
- Hall, S.J.** and P.A. Matson. 2003. Nutrient status of tropical rain forests influences soil N dynamics after N additions. *Ecological Monographs*, 73(1): 107-129.
- Matson, P., K. Lohse, and **S.J. Hall**. 2002. The globalization of nitrogen: consequences for terrestrial ecosystems. *Ambio*, 31(2): 113-119.
- Hall, S.J.** and P.A. Matson. 2002. Environmental variables controlling trace gas emissions from forests: Acid Precipitation and Nitrogen Deposition. Pages 279-306 in H. Papen, R. Gasche, and H. Rennenberg, eds. *Trace Gas Exchange in Forest Ecosystems*. Fundamental and Applied Tree Physiology, Book Series, Volume 3. Kluwer Academic Publishers, The Netherlands.
- Hall, S.J.** and P.A. Matson. 1999. Nitrogen oxide emissions after nitrogen additions in tropical forests. *Nature*, 400 (6740): 152-155.
- Hall, S.J.**, P.A. Matson, and P.M. Roth. 1996. NO_x Emissions from soil: Implications for air quality modeling in agricultural regions. *Annual Review of Energy and the Environment*, 21: 311-46.
- Matson, P.A., C. Billow, **S. Hall**, and J. Zachariassen. 1996. Fertilization practices and soil variations control nitrogen oxide emissions from tropical sugar cane. *Journal of Geophysical Research*, (101) D13: 18,533-45.
- Coyer, J.A. and **S.J. Hall**. 1993. Predation on small northern anchovy (*Engraulis mordax*) by large topsmelt (*Atherinops affinis*). *California Fish and Game* 79(2): 82-84.

ABSTRACTS & PRESENTED PAPERS

* Graduate students and **Undergraduates

2008. K.L. Larson, **S.J. Hall**, *E.Cook, and **J. Vittall. Exploring social and ecological aspects of residential landscapes in metropolitan Phoenix, AZ. 14th International Symposium on Society and Resource Management, June, Burlington, VT.
2008. J.O. Allen, *D.A. Gonzales, R.A. Sponseller, **S.J. Hall**, N.B. Grimm. Atmospheric Dry Deposition of Gaseous and Particulate Nitrogen to Urban-Influenced Sonoran Desert Sites in Central Arizona. 18th Conference on Atmospheric Biogeosciences, April, Orlando, Florida.
2007. S. Pfirman, **S. Hall**, T. Tietenberg, D. Rhoten. Interdisciplinary Environmental Programs: Opportunities and Challenges for Faculty and Students, October, Denver, Colorado.
2007. **S.J. Hall**, R.A. Sponseller, N.B. Grimm, J.P. Kaye, and J.O. Allen. Ecosystem response to the urban atmosphere in the Sonoran Desert. Ecological Society of America, August, San Jose, California.
2007. R. Davies* and **S.J. Hall**. Effects of native urban landscape restoration on belowground ecological processes. Ecological Society of America, August, San Jose, California.
2007. T. Ontl, H. Schaafsma*, J. Briggs, and **S.J. Hall**. Legacies of prehistoric agriculture on herbaceous plant community composition in a desert grassland. Ecological Society of America, August, San Jose, California.
2006. K. Spielmann, J. Briggs, **S.J. Hall**. Society for Human Ecology: the Changing Face of Ecology, Estes Park, CO, October. *Legacies on the landscape: Integrating Archaeology and Ecology in the Study of Landscape Transformation*.
2006. R. Sponseller, **S.J. Hall**, N.B. Grimm, J. Kaye, J. Allen, D. Huber, J. Riddell*, Q. Stewart, C. Kochert, and A. Ghimire**. All Scientists Meeting, Long-term Ecological Research Program, Estes Park, CO. *The urban atmosphere alters ecosystem processes in the Sonoran desert*
2006. **S.J. Hall**, N.B. Grimm, and R. Sponseller. Ecosystem responses to the urban atmosphere in the Sonoran desert: Initial patterns. Ecological Society of America Annual Meeting, Memphis,

- TN.
2005. **S.J. Hall**, and G.P. Asner. Scaling biogenic trace gas emissions from plots to regions: Effects of *Morella faya* (Fire tree) stand size on soil N₂O and NO_x fluxes in Hawai'i Volcanoes National Park. Ecological Society of America Annual Meeting, Montreal, Canada.
 2005. C. O'Brady**, J. Creveling**, and **S.J. Hall**. Neighborhood effects of N-fixing *M. faya* on understory plant nutrients and soil N cycling. Ecological Society of America Annual Meeting, Montreal, Canada.
 2004. J. Ahrens, **S.J. Hall**, P. Marchand, S.A. Johnson. Checking the forest pulse 20 years after disturbance: *Effects of forest thinning on community and ecosystem dynamics*. Ecological Society of America Annual Meeting, Portland, Oregon.
 2004. D.L. Lombardozzi** and **S.J. Hall**. *Effects of an invasive, nitrogen-fixing tree on soil trace gas emissions in Hawai'i Volcanoes National Park*. Ecological Society of America Annual Meeting, Portland, Oregon.
 2004. Grimm, N.B., J.P. Kaye, **S.J. Hall**, J.O. Allen, and D.B. Lewis. *A distinct urban biogeochemistry?* Ecological Society of America Annual Meeting, Portland, Oregon.
 2003. **S.J. Hall**, *Factors controlling nitrification in tropical soils*. Ecological Society of America Annual Meeting, Savannah, Georgia.
 2002. **S.J. Hall**, N.B. Grimm, S.L. Collins, K. Gade, D. Hope, G.D. Jenerette, A.P. Kinzig, J.D. Schade, R. Sponseller, J.R. Welter, W. Wu, T. Flores, M. Luck, R. Erikson, and C. Kochert. *NO_x emissions and uptake by urban soils*. The Fourth Annual Symposium of the Central Arizona-Phoenix Long-Term Ecological Research project, Phoenix, AZ.
 2001. **Hall, S.J.**, G.P. Asner and K. Kitayama. *Effects of N additions on N-oxide emissions and soil N dynamics across a matrix of land use, elevation, soil age, and soil type in Borneo, Malaysia*. Ecological Society of America Annual Meeting, Madison, Wisconsin.
 1998. **Hall, S.J.** and P.A. Matson. *Soil nitrogen dynamics explain patterns of N trace gas losses following N additions in N and P-limited Hawaiian rain forests*. Ecological Society of America Annual Meeting, Baltimore, Maryland.
 1997. **Hall, S.J.** and P.A. Matson. *Factors controlling N gas losses in nitrogen fertilized N and P-limited Hawaiian rain forests*. Ecological Society of America Annual Meeting, Albuquerque, New Mexico.
 1996. **Hall, S.J.** and P.A. Matson. *Nitrogen trace gas responses to experimental long-term nitrogen inputs in N and P-limited Hawaiian rain forests*. Ecological Society of America Annual Meeting, Providence, Rhode Island.
 1990. Ruehl, W., **S. Hall**, H. Rothermel and R. Moorhead. *Comparative Clinical Pathology of Retroviral Infections in Cats and People*. Proceedings of the Annual Meeting of the American College of Veterinary Pathologists, Phoenix, Arizona.
 1990. Ruehl, W.W. and **S.J. Hall**. *Clinical Signs, Laboratory Abnormalities and Survival of Western Cats with Antibodies to FIV*. Proceedings of the Annual Meeting of the American College of Veterinary Internal Medicine, Washington D.C.
 1989. **Hall, S.J.** "The Deep Sea and Monterey Bay Aquarium Research Institute (MBARI)." Video and script used for teaching purposes at the Monterey Bay Aquarium.
 1989. **Hall, S.J.** *Intertidal Movements of the Woolly Sculpin, Clinocottus analis*. Hopkins Marine Station Spring Papers. China Point Symposium, Hopkins Marine Station, Monterey, California.

INVITED LECTURES

2007. Brown University, Dept. of Ecology and Evolutionary Biology. "Long-term human manipulation of ecosystem services in the arid, US Southwest."
2007. University of Cape Town, South Africa, Dept. of Botany and Conservation Biology graduate program. "Urbanization and ecosystem services: Lessons from an arid US city."
2007. University of Minnesota, Dept. of Ecology, Evolution and Behavior. Mary J. Cowan Memorial Lecture on Science Education: "Training interdisciplinary scientists for the 21st century".

- 2007. Arizona State University, Ninth Annual CAP-LTER Poster Symposium, "Xeriscapes: Our domesticated deserts"
- 2006. Soil Science Society of America, Annual Meeting: "NO_x and N₂O emissions from urban ecosystems". The Dennis E. Rolston Symposium on Soil Biophysical and Environmental Controls on Greenhouse Gas Emissions. Indianapolis.
- 2006. American Geophysical Union, Joint Assembly: "Ecosystem responses to urbanization across the Central Arizona-Phoenix (CAP) LTER site". Union Session: Impacts of Urbanization on Environmental Processes. Baltimore,
- 2006. Northern Arizona University, Forestry Seminar Series: "Scaling biogenic trace gases from plots to regions using remote sensing techniques."
- 2003. The Colorado College, Science Colloquium. "Human Alteration of the Nitrogen Cycle: Air Pollution and Biological Invasions."
- 2003. University of Denver, Department of Biology. "Effects of nitrogen additions on nitrification in tropical soils."
- 2002. Colorado State University, Department of Rangeland Ecology. "Linking soil microbial communities and ecosystem processes: structure and function of ammonium-oxidizer communities in tropical and temperate ecosystems."
- 2001. University of Colorado, Department of Evolution, Population, and Organismal Biology. "Factors controlling N-oxide emissions from soils: N availability and microbial community composition."
- 1999. Pikes Peak Environmental Forum, Public Seminar. "Emerging trends in global environmental change."
- 1998. Sigma Xi Research Society, Public Seminar. Agriculture and the environment: Balancing human needs and ecological costs.
- 1997. The Colorado College, Environmental Science Program. "Nitrogen on the Move: Human alteration of the global nitrogen cycle."

COURSES TAUGHT

ASU (2005-present)

- *Soil Ecology, lecture and laboratory*
- *Biology & Society*
- *Introduction to Environmental Science*

Colorado College (1999-2005)

- Introduction to Environmental Science; Ecosystem Ecology; Earth Science; Sustainable Cities;*
- Introduction to Ecology; Environmental Statistics*

University of Colorado (2000-01)

- Society and Earth Science; Biogeochemistry*

GRADUATE STUDENTS

- Major Advisor and Committee Chair:
 - Rachel Davies, M.S.
 - Elizabeth Cook, Ph.D.
 - Jolene Truillo, M.S.
 - Yevgeniy Marusenko, M.S.
- Ph.D Committee Member
 - Bradley Butterfield
 - Tamara Harms
 - Sarah Strauss
 - Hoski Schaafsma
 - Michelle McCrackin

- Jennifer Riddell
- Colleen Strawhacker
- M.S. Committee Member
- Roxanne Rios

PROFESSIONAL SERVICE

Reviewer

- Panel Reviewer, NSF. 2007-08. Ecosystem Science.
- Panel Reviewer, NASA. 2005. Proposals for the Large-Scale Biosphere-Atmosphere Experiment in Amazonia.
- Ad-hoc Reviewer, NSF. 2003-7: Biocomplexity in the Environment (BE): Coupled Biogeochemical Cycles (CBC) Program; Division of Environmental Biology (DEB): Ecosystems Program (Standard and CAREER grants).

Advisory

- The Andrew W. Mellon Foundation Advisory Board, Environmental Studies Program (ESP), 2007, 2004.
- Assembly of Delegates, Organization for Tropical Studies (OTS). 2005. Participated as ASU delegate in OTS 2020 Strategic Planning Meeting, La Selva Biological Station, Costa Rica.

Institutional and Other

- Arizona State University Committees and Service:
2007-present. Ecology, Evolution, and Environmental Science (EEES) Representative, School of Life Sciences Undergraduate Programs Committee. 2007. Participant, NSF site review for CAP-LTER. 2006. Chair, CAP graduate student grant panel, 2006. Invited speaker, Preparing Future Faculty Seminar Series: "Strategies for success at an R1 University" December, 2006. Invited speaker, SOLS SOLUR seminar, "Diversity in scientific research" (October, 2006)
- Colorado College Committees and Service:
2003-4: Minority Concerns Committee; Timothy Linneman Memorial Lecture on the Environment (chair); Office of Admissions (faculty panel); New Student Orientation (faculty panel); New Faculty Orientation (faculty panel) Sustainable Living House (faculty sponsor); Udall Scholarship for the Environment and Native American Studies (faculty sponsor). 2002-03: Committee on Instruction; Faculty Seminars Committee.
- Other Professional Service
2003-04: Presider, ESA Oral Session (Forest Ecology; Stream Biogeochemistry); Lecturer, Howard Hughes Summer Bridge Program in Biology. 2001-03: CC Teaching and Learning Seminars (participant). 2002. Web-based learning, ITS Dept. (participant); NSF science education conference (SENCER), San Jose, CA, (CC team member); Invited Speaker, The Colorado Springs School (grades 9-12).

MEMBERSHIPS & CERTIFICATIONS

- Ecological Society of America, 1995 – present.
- Secondary Science Teaching Certification, Biological Sciences; Grades 9-12.