
SHARON JAE HALL

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EDUCATION

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

HONORS & AWARDS

- ASU Alumni Association Founder's Day Faculty Teaching Award
- ASU Global Institute of Sustainability, Leadership Academy Fellow, 2014-15.
- Nominee, ASU Centennial Professorship for excellence in teaching and community service, 2012 and 2006.
- John D. and Catherine T. MacArthur Professorship for excellence in teaching and scholarship, The Colorado College, 2003-05.
- Gresham Riley Post-Doctoral Scholar, The Colorado College, 1998-99.
- NASA Earth Systems Science Doctoral Fellow, 1996-1998.
- NSF Doctoral Fellow, 1994-1996.
- ESA Student Presentation Award, Soil Ecology Section; Providence, Rhode Island, 1996.
- Doctoral Fellow, Dept. of Soil Science, UC Berkeley, 1993.

POSITIONS HELD

Current:

- **Associate Professor**, School of Life Sciences, Arizona State University
- **Senior Sustainability Scientist**, Julie Ann Wrigley Global Institute of Sustainability
- **Director**, Environmental Life Sciences Ph.D. Program
- **Science Advisory Board**, McDowell Sonoran Field Institute
- **Governing Board**, Ecological Society of America, Elected Member-At-Large
- **Executive Board**, Central Arizona-Phoenix Long-term Ecological Research Program
- **Executive Board**, Global Drylands Center, ASU
- **Editorial Board**, Landscape and Urban Planning Journal, Elsevier
- **Faculty Lead:**
 - Barrett Honors College Biological Sciences Advisor
 - Nature at ASU Undergraduate Mentoring and Professional Development Program, 2016-present.
 - Undergraduate Conservation Biology & Ecology concentration of the Biological Sciences Major, School of Life Sciences. See: <https://vimeo.com/164337919>

Former:

- **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.
- **Teaching Assistant**, UC Berkeley and Stanford University.
- **Biology Research Assistant**, Stanford University, 1987-92.
- **Instructor**, Grades 7-Adult Biology and Ecology 1990-93.

PUBLICATIONS

Published Peer-Reviewed Articles

1. 2017. P.M. Groffman, M. Avolio, J. Cavender-Bares, N.D. Bettez, J.M. Grove, **S.J. Hall**, S.E. Hobbie, K.L. Larson, S.B. Lerman, D. Locke, J. Heffernan, J.L. Morse, C. Neill, K. Nelson, J. O'Neil-Dunne, D. Pataki, C. Polsky, R.V. Pouyat, R. Roy Chowdhury, M. Steele and T. Trammell. Ecological homogenization of residential macrosystems. *Nature Ecology and Evolution*. DOI: 10.1038/s41559-017-0191 | www.nature.com/natecolevol
2. 2017. M. Wheeler, C. Neill, P.M. Groffman, M. Avolio, N. Bettez, J. Cavender-Bares, R. Roy Chowdhury, L. Darling, J.M. Grove, **S.J. Hall**, J. B. Heffernan, S. E. Hobbie, K.L. Larson, J. L. Morse, K.C. Nelson, L. Ogden, J.P.M. O'Neil-Dunne, D.E. Pataki, C. Polsky, M. Steele, and T. Trammell. Continental-scale homogenization of residential lawn plant communities. *Landscape and Urban Planning*, in press.
3. 2017. A. Sullivan; A.M. York; D.D. White; **S.J. Hall**, and S.T. Yabiku. De jure versus de facto institutions: trust, information, and collective efforts to manage the invasive mile-a-minute weed (*Mikania micrantha*).
4. 2017. A. Sullivan; A.M. York; L. An; S.T. Yabiku, and **S.J. Hall**. How does perception at multiple levels influence collective action in the commons? The case of *Mikania micrantha* in Chitwan, Nepal. *Forest Policy and Economics*, 80(2017): 1-10. doi: 10.1016/j.forpol.2017.03.0012017
5. 2017. M.R. McHale, **S.J. Hall**, A. Majumdar, and N.B. Grimm. Carbon lost and carbon gained: A study of vegetation and carbon tradeoffs among diverse land uses in Phoenix, AZ. *Ecological Applications*, 27(2), 2017, pp. 644–661.
6. 2016. H. Heavenrich and **S.J. Hall**. Elevated soil nitrogen pools after conversion of turfgrass to water-efficient residential landscapes. *Environmental Research Letters*, doi:10.1088/1748-9326/11/8/084007.
7. 2016. P.M. Groffman, J. Cavender-Bares, N. Bettez, J.M. Grove, **S.J. Hall**, J. B. Heffernan, S. E. Hobbie, K.L. Larson, D. Locke, J. L. Morse, C. Neill, K.C. Nelson, J.P.M. O'Neil-Dunne, L. Ogden, D.E. Pataki, C. Polsky, R. Roy Chowdhury. Satisfaction, water and fertilizer use in the American residential macrosystem. *Environmental Research Letters*, 11: 034004.
8. 2016. T.L.E. Trammell, D.E. Pataki, J. Cavender-Bares, P. Groffman, **S.J. Hall**, J.B. Heffernan, S.E. Hobbie, J.L. Morse, C. Neill, K.C. Nelson. Plant nitrogen concentration and isotopic composition in residential lawns across seven U.S. cities *Oecologia* 181(1): 271-285. DOI 10.1007/s00442-016-3566-9.
9. 2015. **S.J. Hall**, et al. Convergence of microclimate in residential landscapes across diverse cities in the United States. *Landscape Ecology* 31(1), 101-117. DOI: 10.1007/s10980-015-0297-y.
10. 2015. K. L. Larson, K. C. Nelson, S. R. Samples, **S. J. Hall**, N. Bettez, J. Cavender-Bares, P. M. Groffman, J.M. Grove, J. B. Heffernan, S. E. Hobbie, J. Learned, J. L. Morse, C. Neill, L. A. Ogden, J. O'Neil-Dunne, D. E. Pataki, C. Polsky, R. Roy Chowdhury, M. Steele, T. L. E. Trammell. Ecosystem services in managing residential landscapes: Priorities, value dimensions, and cross-regional patterns. *Urban Ecosystems*, DOI 10.1007/s11252-015-0477-1.
11. 2015. M. Davis, E. Cook, S. Collins, and **S.J. Hall**. Top-down vs. bottom-up regulation of herbaceous primary production and composition in an arid, urbanizing ecosystem. *Journal of Arid Environments*, 116; 103-114. doi:10.1016/j.jaridenv.2015.01.018.

12. 2015. Y. Marusenko, F. Garcia-Pichel, and **S.J. Hall**. Ammonia-oxidizing archaea respond positively to inorganic N addition in desert soils. *FEMS Microbiology Ecology*, 91(2):1-11.
13. 2015. Shuster, W.D., S.D. Dadio, C.E. Burkman, S.R. Earl, and **S.J. Hall**. Hydrogeological assessments of parcel-level infiltration in an arid urban ecosystem. *Soil Science Society of America Journal*, doi:10.2136/sssaj2014.05.0200.
14. 2014. C. Zhang, X. Li, D. Niu, **S.J. Hall**, C. Wan. Effects of simulated nitrogen deposition on soil respiration components and their temperature sensitivities in a semiarid grassland. *Soil Biology and Biochemistry* 75, 113-123.
15. 2014. C. Polsky et al. (**S.J. Hall**, 7th of 17 collaborators). Assessing the homogenization of urban land management with an application to US residential lawn care. *Proceedings of the National Academy of Sciences*, 111(12): 4432-4437. doi/10.1073/pnas.1323995111
16. 2014. M. K. Steele et al. (**S.J. Hall**, 7th of 17 collaborators). Convergent surface water distributions in U.S. cities. *Ecosystems*, February: 1-13. DOI: 10.1007/s10021-014-9751-y.
17. 2014. Groffman, P.M., et al. (**S.J. Hall**, 6th of 17 collaborators). Ecological homogenization of urban America. *Frontiers in Ecology and the Environment*, 12(1): 74–81, doi:10.1890/120374.
18. 2014. Nakase, D.K., A.S. Hartshorn, K.A. Spielmann, and **S.J. Hall**. Eolian deposition and soil fertility in a prehistoric agricultural complex in central Arizona. *Geoarchaeology*, 29: 79-97. doi 10.1002/gea.21463.
19. 2013. **Hall, S.J.** *J. Trujillo, D. Nakase, C. Strawhacker, M. Kruse-Peeples, H. Schaafsma, and J. Briggs. Legacies of prehistoric agricultural practices within plant and soil properties across an arid ecosystem. *Ecosystems*. doi 10.1007/s10021-013-9681-0.
20. 2013. Marusenko, Y., D.P. Huber, and **S.J. Hall**. Fungi mediate nitrous oxide production but not ammonia oxidation in arid and semi-arid soils. *Soil Biology and Biochemistry*, 63: 24-36.
21. 2012. Boone, C., *E. Cook, , **S.J. Hall**, N.B. Grimm, C. Raish, D. Finch, M. Nation, and A. York. A comparative gradient approach to understanding and managing urban ecosystems. *Urban Ecosystems*, DOI 10.1007/s11252-012-0240-9.
22. 2012. Sponseller, R.A., **S.J. Hall**, D. Huber, N.B. Grimm, J.P. Kaye, C. Clark, and S. Collins. Variation in monsoon precipitation drives spatial and temporal patterns of *Larrea tridentata* growth in the Sonoran Desert. *Functional Ecology*, DOI 10.1111/j.1365-2435.2012.01979.x.
23. 2011. Niu, D., **S.J. Hall**, H. Fu, J. Kang, Y. Qin, and J.J. Elser. Grazing exclusion alters ecosystem carbon pools in Alxa desert steppe. *New Zealand Journal of Agricultural Research*, 54(3): 127-142. DOI 10.1080/00288233.2011.576683.
24. 2011. Cook, E., **S.J. Hall**, and K. Larson. Residential landscapes in an urban socio-ecological context: Multi-scalar drivers and legacies of management practices, ecological structure, and ecosystem services. *Urban Ecosystems*, DOI 10.1007/s11252-011-0197-0.
25. 2011. Pardo, L.H., et al. (**S.J. Hall**, 14th of 22 collaborators), Effects of N deposition and empirical critical loads for nitrogen for ecoregions of the United States. *Ecological Applications*, DOI 10.1890/10-2341.1.
26. 2011. Kaye, J.P., S.E. Eckert, D.A. Gonzalez, J.O. Allen, **S.J. Hall**, R.A. Sponseller, and N.B. Grimm. Decomposition of urban atmospheric carbon in Sonoran Desert soils. *Urban Ecosystems*, DOI 10.1007/s11252-011-0173-8.
27. 2011. **Hall, S.J.**, R.A. Sponseller, N.B. Grimm, D. Huber, J.P. Kaye, C. Clark, and S. Collins. Ecosystem response to nutrient enrichment across an urban airshed in the Sonoran Desert. *Ecological Applications*, 21(3): 640-660.
28. 2011. Marusenko, Y., P. Herckes, and **S.J. Hall**. Distribution of polycyclic aromatic hydrocarbons in soils of urban transportation corridors in an arid ecosystem. *Water, Air, and Soil Pollution*, 219 (1): 473-487. DOI 10.1007/s11270-010-0721-5.
29. 2010. Larson, K.L., E. Cook, C. Strawhacker, and **S.J. Hall**. The influence of diverse values, ecological structure, and socio-spatial context on residents' multifaceted land-management decisions. *Human Ecology*, DOI 10.1007/s10745-010-9359-6.

30. 2010. Davies, R. and **S.J. Hall**. Direct and indirect effects of urbanization on soil and plant nutrients in desert ecosystems of the Phoenix metropolitan area. *Urban Ecosystems*, 13(2). DOI: 10.1007/s11252-010-0120-0.
31. 2010. **Hall, S.J.** and P.J. Marchand. Effects of stand density on ecosystem properties in subalpine forests of the southern Rocky Mountains. *Annals of Forest Science*, 67:102. DOI: 10.1051/forest/2009083.
32. 2009. **Hall, S.J.**, **B. Ahmed, **P. Ortiz, *R. Davies, R. Sponseller, and N.B. Grimm. 2009. Urbanization alters soil microbial functioning in the Sonoran Desert. *Ecosystems*, 12:, DOI: 10.1007/s10021-009-9249-1.
33. 2008. **Hall, S.J.** and **D. Lombardozzi. Short-term effects of wildfire on montane stream ecosystems in southern Colorado: 1-2 years post burn. *Western North American Naturalist*, 68 (4): 453-462.
34. 2008. **Hall, S.J.**, D. Huber, and N.B. Grimm. Soil N₂O and NO_x emissions from an arid urban ecosystem. *Journal of Geophysical Research-Biogeosciences*, (113) G1, G01016
35. 2008. *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.
36. 2007. **Hall, S.J.** and G.P. Asner. Biological invasions alter regional N-oxide emissions in Hawaiian rain forests. *Global Change Biology*, (13) 10, 2143-2160.
37. 2005. Pfirman, S., **S.J. Hall**, and T. Tietenberg. Environmental programs: Liberal arts colleges and interdisciplinary education. *Environmental Science & Technology*, 39 (10): 221A-224A.
38. 2004. **Hall, S.J.**, G. Asner and K. Kitayama. Land use, climate, and substrate controls over soil dynamics and N-oxide emissions in Borneo. *Biogeochemistry*, 70(1): 27-58.
39. 2003. **Hall, S.J.** and P.A. Matson. Nutrient status of tropical rain forests influences soil N dynamics after N additions. *Ecological Monographs*, 73(1): 107-129.
40. 2002. Matson, P., K. Lohse, and **S.J. Hall**. The globalization of nitrogen deposition: consequences for terrestrial ecosystems. *Ambio*, 31(2): 113-119.
41. 1999. **Hall, S.J.** and P.A. Matson. Nitrogen oxide emissions after nitrogen additions in tropical forests. *Nature*, 400 (6740): 152-155.
42. 1996. **Hall, S.J.**, P.A. Matson, and P.M. Roth. NO_x Emissions from soil: Implications for air quality modeling in agricultural regions. *Annual Review of Energy and the Environment*, 21: 311-46.
43. 1996. Matson, P.A., C. Billow, **S. Hall**, and J. Zachariassen. Fertilization practices and soil variations control nitrogen oxide emissions from tropical sugar cane. *Journal of Geophysical Research*, (101) D13: 18,533-45.
44. 1993. Coyer, J.A. and **S.J. Hall**. Predation on small northern anchovy (*Engraulis mordax*) by large silversides (*Atherinidae*). *California Fish and Game* 79(2): 82-84.

Published Book Chapters

1. 2015. K.A. Spielmann, **S.J. Hall**, M. Kruse-Peeples, D. Nakase, and J. Trujillo. Soil Texture and Agricultural Resilience in the Prehistoric Southwest: Farming on Perry Mesa, Arizona. *In From Field to Table: Historical ecology of regional subsistence strategies*. University of South Carolina Press.
2. 2014. **Hall, S.J.** Soil and the Future of Food: Challenges and Opportunities for Feeding 9 Billion People. *In The Soil Underfoot: Infinite Possibilities for a Finite Resource*, CRC Press. G. Churchman and E. Landa (eds).
3. 2011. Spielmann, K.A., *H. Schaafsma, J. Briggs, **S.J. Hall**, and M. Kruse. 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. University Press of Colorado. 448 pp.

URL:http://www.upcolorado.com/book/Proceedings_of_the_Southwest_Symposium/Movement_Connectivity_and_Landscape_Change_in_the_Ancient_Southwest_Cloth.

4. 2010. **Hall, S.J.** Empirical Critical Loads of Nitrogen for US Ecoregions: Tropical and subtropical humid forests. In: Assessment of Effects of N deposition and Empirical Critical Loads of Nitrogen for Ecoregions of the United States. L.H. Pardo (ed). USDA Forest Service General Technical Report, 200 pp. URL: <http://treearch.fs.fed.us/pubs/38109>
5. 2002. **Hall, S.J.** and P.A. Matson. 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.

Published White Papers and Reports

1. 2009. Cook E., C. Boone, **S.J. Hall**, and M. Nation. Urban long-term research across a Southwest socio-ecological gradient. A White Paper prepared for the US Forest Service Southwest Research Station.
2. 2008. Larson K.L., **S.J. Hall**, E. Cook, B. Funke, C. Strawhacker, and V. Turner. Social-ecological dynamics of residential landscapes: Human drivers of management practices and ecological structure in an urban ecosystem context. The Final Report from an Interdisciplinary Graduate Research and Education Training (IGERT) Workshop 52 pp., School of Sustainability, Arizona State University. URL: <http://caplter.asu.edu/research/research-projects/research-home/research-highlight-9/>.
3. 2005. **Hall, S.J.**, S. Pfirman, and T. Titenberg. Environmental Programs at Liberal Arts Colleges. Findings and Recommendations for the Andrew W. Mellon Foundation. Project Kaleidoscope Volume IV Article Series: What Works, What Matters, What Lasts. URL: http://www.uwec.edu/Chancellor/stratPlan/upload/ES_background.pdf

ABSTRACTS & PRESENTED PAPERS

† *Award-winning*

2017. C. Holmes, H. Heavenrich, and **S.J. Hall**. Trace Metal Content of Community Garden Soils in metro Phoenix, AZ. 2017 Southwest Desert Ag Conference, Yuma AZ.
- †2017. M.M. Wheeler, E. Vivoni, and **S.J. Hall**. Residential soil water model evaluation to improve outdoor water use recommendations in Phoenix, Arizona. 2017 CAP LTER All Scientists Meeting, Tempe, AZ.
2016. M.M. Wheeler, E. Vivoni, and **S.J. Hall**. Residential soil water model evaluation to improve outdoor water use recommendations in Phoenix, Arizona. American Geophysical Union Annual Conference, San Francisco, December 2016.
2016. **S.J. Hall** and C. Holmes. Trace metals in community gardens in metro Phoenix. Desert Ag Conference, Gilbert, AZ. May 2016.
2016. T.L.E. Trammell, Diane E. Pataki, Peter M. Groffman, Neil Bettez, Jen L. Morse, Jeannine Cavender-Bares, Morgan Grove, **Sharon J. Hall**, James Heffernan, Sarah E. Hobbie, Chris Neill, Kristen C. Nelson, Laura A. Ogden. Soil nitrogen isotope composition in residential lawns across six U.S. cities. Soil Science Society of America Conference, Phoenix, AZ, October 2016.
2016. M. Clark, S. Yabiku, and **S.J. Hall**. Homogenization of residential yard soil moisture in US cities. 2016 INTERFACE Meeting, St. Pete's Beach, FL.
2016. M.M. Wheeler, J. Learned, H. Heavenrich, and **S.J. Hall**. Homogenization of residential yard soil moisture in US cities. 2016 INTERFACE Meeting, St. Pete's Beach, FL.
2016. M.M. Wheeler, J. Learned, H. Heavenrich, and **S.J. Hall**. Regional patterns and homogenization of

- residential yard soil moisture in US cities. 2016 CAP LTER All Scientists Meeting, Tempe, AZ.
2015. H. Heavenrich and **S.J. Hall**. Soil nutrients during a 'sustainable' urban grassland to shrubland transition. 2015 Meeting of the Ecological Society of America, Baltimore, MD.
2015. J. Shaw, **S.J. Hall**, and J. Learned. Patterns of surface rock cover and implications for plant, water, and nutrient dynamics at long-term ecological research sites in Phoenix, AZ. 2015 Meeting of the Ecological Society of America, Baltimore, MD.
- † 2015. H. Heavenrich, **S.J. Hall**, J. Rittenhouse, and C. Holmes. Where has all the nitrogen gone?. Investigating soil nutrients during the transition from lawn to xeric landscapes. 2015 CAP LTER All Scientists Meeting, Tempe, AZ.
2015. J. Shaw, **S.J. Hall**, and J. Learned. Patterns of surface rock cover and implications for plant, water, and nutrient dynamics at long-term ecological research sites in Phoenix, AZ. 2015 CAP LTER All Scientists Meeting, Tempe, AZ.
2014. W.D. Pearse et al. (**S.J. Hall**, 9th of 17 collaborators). Homogenization of plant diversity in six major USA cities: integrating socio-economic, environmental, and phylogenetic information. 2014 Annual Meeting of the Ecological Society of America, August, Sacramento, CA.
2014. S.T. Yabiku, **S.J. Hall**, A.M. York, J.E. Glick and D.J. Ghimire. Tablet-assisted collection and mapping of human disturbance activities across complex social-ecological landscapes. 2014 Annual Meeting of the Ecological Society of America, August, Sacramento, CA.
2014. J. Dai, **S.J. Hall**, L. An, S.T. Yabiku, D. Ghimire, and A.M. York. Linking Forest Health with Vulnerability to an Invasive Plant Species: A Case Study in Chitwan, Nepal. 2014 Meeting of the American Association of Geographers, April, Tampa, FL.
2014. M. Moran, **E. Barton, J. Learned, and **S.J. Hall**. Low impact development ordinances: How are they influencing landscape design? 2014 CAP LTER All Scientists Meeting, Tempe, AZ.
2014. C. Holmes and **S.J. Hall**. Soil contamination and the implications of growing food in urban gardens. 2014 CAP LTER All Scientists Meeting, Tempe, AZ.
2014. E. Barton, **M. Moran, J. Learned, B. Ruddell, and **S.J. Hall**. A comparison of yard-scale climates in the Phoenix metro area. 2014 CAP LTER All Scientists Meeting, Tempe, AZ.
2014. M. Christman, **S.J. Hall**, and B. Ball. The dynamics of N and P during *Ambrosia* litter degradation in urban versus rural desert environments. CAP LTER All Scientists Meeting and 2013 CAP LTER Site Review Symposium; September, Tempe, AZ.
2014. H. Heavenrich and **S.J. Hall**. Hidden pools of nitrate in emerging sustainable landscapes. 2014 CAP LTER All Scientists Meeting, Tempe, AZ.
- † 2014. E.M. Cook and **S.J. Hall**. Spatial distribution of ecologically relevant urban air pollutants in the Sonoran Desert. 2014 CAP LTER All Scientists Meeting, Tempe, AZ.
2014. S. Yabiku, A. York, and **S.J. Hall**. Armed conflict, community forest user groups, and natural resource management, 2014 Annual Meeting of the Population Association of America, May, Boston, MA.
2013. E. Cook and **S.J. Hall**. Spatial distribution of ecologically relevant atmospheric compounds in native Sonoran Desert protected areas within and surrounding Phoenix, Arizona. 2013 meeting of the National Atmospheric Deposition Program, Salt Lake City, UT.
2013. L. Turnbull, **S.J. Hall**, B. Ball, J. Sparks, and N. Grimm. Mechanisms regulating the fate of nitrogen in deserts. American Geophysical Union, Chapman Conference, Tucson, AZ.
2013. B. Shrestha, **S.J. Hall**, S. Yabiku, A. York, L. An, D. Ghimire, J. Glick, and S. Murphy. Human community dynamics and social-ecological vulnerability in a biodiversity hotspot. 2013 CAP LTER All Scientists Meeting, Tempe, AZ.
- † 2013. E. Cook, P. Padgett, and **S.J. Hall**. Effects of multiple pollutants on growth of desert annual plants. 2013 CAP LTER All Scientists Meeting, Tempe, AZ.
- † 2013. D. Huber, K. Lohse, R. Sponseller, and **S.J. Hall**. Climate controls the fate of anthropogenic nitrogen additions in desert ecosystems. 2013 CAP LTER All Scientists Meeting, Tempe,

AZ.

2013. J. Learned, D. Huber, D. Nakase, E. Vivoni, and **S.J. Hall**. Experimentally validated mathematical modeling reveals the influence of surface rock cover on soil water availability in a semi-arid ecosystem. 2013 CAP LTER All Scientists Meeting, Tempe, AZ.
2013. M. Camba, E. Warkus, D. Nakase, and **S.J. Hall**. Surface rock affects succulent distribution in a prehistorically active agricultural landscape. 2013 CAP LTER All Scientists Meeting, Tempe, AZ.
2012. **S.J. Hall**, Y. Marusenko, E. Cook, D. Huber, and K. Wyant. Nutrient enrichment in an arid, urbanizing ecosystem: Snapshots of surprises. 2012 Annual Meeting of the Ecological Society of America, August, Portland, OR.
2012. B. Ramirez, Y. Marusenko, and **S.J. Hall**. Ammonia oxidation across patch types the Sonoran Desert. 2012 Annual Meeting of the Ecological Society of America, August, Portland, OR.
2012. E. Warkus, M. Camba, *D. Nakase, C. Strawhacker, J. Learned, and **S.J. Hall**. Effects of surface rock on succulent distribution in a prehistorically active landscape. 2012 Annual Meeting of the Ecological Society of America, August, Portland, OR.
- †2012. E. Cook, **S.J. Hall**, and R.A. Sponseller. Nitrogen deposition is lower than expected in the Phoenix metro area. 2011 CAP LTER Poster Symposium, January, Tempe, AZ.
2012. Y. Marusenko, K. Wyant, **S.J. Hall** and J. Sabo. Links between soil food webs and ecosystem function in urban landscapes. 2011 CAP LTER Poster Symposium, January, Tempe, AZ.
2012. B. Ramirez, Y. Marusenko, and **S.J. Hall**. Ammonia oxidizing communities under legumes in the Sonoran Desert. 2011 CAP LTER Poster Symposium, January, Tempe, AZ.
- † 2012. E. Warkus, D. Nakase, and **S.J. Hall**. Effects of surface rock on succulent distribution in the Agua Fria National Monument. 2011 CAP LTER Poster Symposium, January, Tempe, AZ.
- † 2012. M. Schmoker, E. Cook, S. Collins, and **S.J. Hall**. Top down vs. bottom up effects on plant production and community composition across an urban-rural gradient. 2011 CAP LTER Poster Symposium, January, Tempe, AZ.
2011. J. Angstmann, **S.J. Hall**, E. February, A. West, N. Allsopp, and W. Bond. Nitrogen deposition in a southern hemisphere biodiversity hotspot within and surrounding Cape Town, South Africa. 2011 American Geophysical Union Fall Meeting, December, San Francisco, CA.
2011. E. Cook, **S.J. Hall**, R.A. Sponseller, D.P. Huber, S. Earl, and N.B. Grimm. Atmospheric nitrogen deposition fluxes in arid Phoenix, Arizona: A comparison of sampling methods. 2011 Annual Meeting of the Ecological Society of America, August, Austin, TX.
2011. M. Schmoker, E. Cook, S. Collins, and **S.J. Hall**. Impacts of urban herbivory on primary production of herbaceous annual plants in an arid ecosystem. 2011 Annual Meeting of the Ecological Society of America, August, Austin, TX.
2011. J. Sayles, K.L. Larson, E. Cook, and **S.J. Hall**. The influence of environmental values and neighborhood context on household & neighborhood biodiversity. 2011 Annual Meeting of the American Association of Geographers, April, Seattle, WA.
2011. M. Kruse-Peeples, D. Nakase, and **S.J. Hall**. Soil Nutrient Dynamics and Moisture Retention of Prehistoric Runoff Agricultural Systems the Perry Mesa Region, Central Arizona. Organized symposium: Approaches to Prehispanic Agricultural Soils in the New World. 2011 Society for American Archaeology Annual Meeting, April, Sacramento, CA.
2010. J. Trujillo, D. Nakase, K. Spielmann, M. Kruse-Peeples, and **S.J. Hall**. Legacies on the Landscape: Long-term socio-ecological interactions in the US Southwest. 2010 Decade of Discovery Science Symposium, Bureau of Land Management, May, Albuquerque, NM.
2010. D. Nakase, T. Hartshorn, and **S.J. Hall**. Fertility and prehistoric farming of semi-arid soils in the southwestern US. 2010 Annual Meeting of the Ecological Society of America, August, Pittsburgh, PA.
2010. Y. Marusenko, D. Huber, P. Ortiz, and **S.J. Hall**. Fungal and bacterial control of the N cycle in arid and semi-arid ecosystems. 2010 Annual Meeting of the Ecological Society of America,

- August, Pittsburgh, PA.
2009. Y. Marusenko, D. Huber, and **S.J. Hall**. Fungi dominate N₂O production in arid and semi-arid ecosystems. 2009 LTER All Scientists Meeting, Estes Park, Colorado.
2009. Y. Marusenko, P. Herckes, and **S.J. Hall**. Fate of PAH compounds in an arid city. 2009 LTER All Scientists Meeting, Estes Park, Colorado.
2009. **S.J. Hall**, R. Sponseller, N.B. Grimm, C. Clark, S. Collins, D. Huber, J.P. Kaye, and J. Allen. Ecosystem response to the urban atmosphere in the Sonoran Desert. 2009 Annual Meeting of the Ecological Society of America, August, Albuquerque, NM.
2009. E. Cook, *C. Strawhacker, K.L. Larson, and **S.J. Hall**. Values and other social drivers of the management and ecological properties of residential landscapes in Phoenix, Arizona. 2009 Annual Meeting of the Ecological Society of America, August, Albuquerque, NM.
2009. Y. Marusenko, P. Herckes, and **S.J. Hall**. Fate of PAH compounds in an arid city. 2009 Annual Meeting of the Ecological Society of America, August, Albuquerque, NM.
2009. M. Salem, E. Cook, K.L. Larson, and **S.J. Hall**. Effects of landscape cover on microclimate in urban residential landscapes of the Phoenix metropolitan area. 2009 Annual Meeting of the Association of American Geographers, March, Las Vegas, NV.
2009. K.L. Larson, E. Cook, and **S.J. Hall**. Social-ecological dynamics of residential landscapes in an urban ecosystem context. 2009 Annual Meeting of the Association of American Geographers, March, Las Vegas, NV.
2009. B. Funke, E. Cook, C. Strawhacker, V. Turner, K.L. Larson, and **S.J. Hall**. Legacy effects and the socio-ecological dynamics of residential landscapes: An interdisciplinary study in Phoenix, AZ. 2009 Annual Meeting of the Association of American Geographers, March, Las Vegas, NV.
- † 2009. Y. Marusenko, P. Herckes, and **S.J. Hall**. Fate of PAH compounds in an arid city. 10th Annual GELSS Symposium (Graduates in Earth, Life, and Social Sciences), February, Tempe, AZ.
- † 2009. C. Strawhacker, E. Cook, K. Larson, and **S.J. Hall**. Values and other social drivers of the management and ecological properties of residential landscapes in Phoenix, Arizona. 11th Annual Poster Symposium of the Central Arizona-Phoenix Long-Term Ecological Research project, Tempe, AZ.
2008. **S.J. Hall**, H. Schaafsma, J. Trujillo, and J. Briggs. Legacies of prehistoric agriculture in the arid US Southwest. Organized symposium participant, Combining Archaeological and Ecological Perspectives to Understand the Reciprocal Dynamics of People and the Ecosystems that Sustain Them. 2008 Annual Meeting of the Ecological Society of America, August, Milwaukee, WI.
2008. E. Cook, **S.J. Hall**, and K.L. Larson. Drivers of residential landscape structure and functioning: a literature review and synthesis. Ecological Society of America, August, Milwaukee, WI.
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.
- † 2008. E. Cook, **S.J. Hall**, and K.L. Larson. Drivers of residential landscape structure and functioning: a literature review and synthesis. 9th Annual GELSS Symposium (Graduates in Earth, Life, and Social Sciences), February, Tempe, AZ.
2007. Pfirman, S., S. Hall, T. Tietenberg, and D. Rhoten, Interdisciplinary Environmental Programs: Opportunities and Challenges for Faculty and Students. Paper No. 79-13, Geological Society of America Annual Meeting, October, Denver, CO
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, Briggs, J., and **S.J. Hall**. The Changing Face of Ecology: Integrating Archaeology and Ecology in the Study of Landscape Transformation. Interdisciplinary Integration and Practice: Reconciling Humans and Nature. XIV International Conference of the Society for Human Ecology, October, Estes Park, CO.
2006. R. Sponseller, **Hall, S.J.**, N.B. Grimm, J. Kaye, J. Allen, D. Huber, J. Riddell, Q. Stewart, C. Kochert, and A. Ghimire. August, 2006. 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, Tempe, 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.** *Intertidal Movements of the Woolly Sculpin, Clinocottus analis*. Hopkins Marine Station Spring Papers. China Point Symposium, Hopkins Marine Station, Monterey, California.

PROFESSIONAL SERVICE

- **Present-2003.** Program reviewer for college environmental programs.
- **Present-2016.** Faculty Leader, Central AZ Chapter of the Society for Conservation Biology
- **Present-2015.** Integrative Research Theme Leader, Residential Landscapes, CAP LTER.
- **Present-1998.** Proposal and manuscript reviewer
 - External and Panel Reviewer, NSF Ecosystem Science. NSF Coupled Natural-Human Systems; NSF Doctoral Dissertation Improvement Grants and NSF Ecosystem Science; NASA: Proposals for the Large-Scale Biosphere-Atmosphere Experiment in Amazonia; NSF Biocomplexity in the Environment (BE): Coupled Biogeochemical Cycles (CBC) Program; NSF CAREER program.
 - Manuscript reviewer: *Ambio, American Geophysical Union Chapman Conference Book Series, Biogeochemistry, Bioscience, Ecological Applications, Ecology, Ecology Letters, Ecosystems, Frontiers in Ecology and the Environment, Forest Science, Geophysical Research Letters, Global Biogeochemical Cycles, Global Change Biology, Journal of Arid Environments, Journal of Geophysical Research, Journal of Tropical Ecology, Landscape and Urban Planning, Microbial Ecology, Nature, Oecologia, Plant and Soil, Proceedings of the United States National Academy of Sciences, Soil Science, Soil Biology and Biochemistry, Soil Science Society of America Journal.*
- **2015-2011.** Cluster Leader, Biogeochemical Fluxes and Environmental Justice Integrative Program Area, CAP LTER.
- **2015-2014.** Advisory Board, Center for Biodiversity Outcomes, ASU.
- **2011.** Panel Speaker, NSF Advisory Board, **2011**.
- **2007, 2004.** Andrew W. Mellon Foundation Advisory Board, Environmental Studies Program
- **2005.** Assembly of Delegates, Organization for Tropical Studies (OTS).
- ASU Committees and Service:
 - Present.** ASU College of Liberal Arts and Sciences Curriculum Committee; ASU-OKED Limited Submissions Standing Committee; School of Life Sciences Graduate Programs Committee; Biological Sciences Advisor for the Barrett Honors College
 - 2016-2015.** Speaker on "Diversity in the Life Sciences" for the SOLUR Initiative for Maximizing Student Development program (IMSD); CAP LTER Site Manager search committee; SOLS Director Search Committee; SOLS Strategic Assessment Committee;
 - 2015-2009.** Undergraduate Programs Committee, School of Life Sciences. **2013.** Presenter, ASU-Desert Discovery Center partnership, ASU Foundation; SOLS faculty coordinator, Biomimicry 3.8 MS program
 - 2013-12.** Committee chair, Lisa Dent Memorial Fellowship (for women ecologists at ASU); **2011-10.** Faculty sponsor for ASU chapter of Ecological Society of America SEEDS program ('SEEDS Devils') (Strategies for Ecology Education, Diversity, and Sustainability). Equal Opportunity representative, faculty search committee (microbial ecology). Committee member, Lisa Dent Memorial Fellowship. Invited speaker, Preparing Future Faculty Seminar Series:

- 2011-09.** Equal Opportunity representative, faculty search committee (Community/Ecosystem ecology). **2009.** Invited speaker, Preparing Future Faculty Seminar Series: “Careers at non-R1 institutions” **2007.** Participant, NSF site review for CAP LTER. **2006.** Chair, CAP graduate student grant panel; Invited speaker, Preparing Future Faculty Seminar Series: “Strategies for success at an R1 University; Invited speaker, SOLS SOLUR seminar, ‘Diversity in scientific research’.
- Colorado College Committees and Service:

2004-3: 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). **2003-02:** Committee on Instruction; Faculty Seminars Committee.
 - Other Professional Service

2004-03: Presider, ESA Oral Session (Forest Ecology; Stream Biogeochemistry); Lecturer, Howard Hughes Summer Bridge Program in Biology. **2003-01:** 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).

COMMUNITY EMBEDDEDNESS

- Scientific advisor on study to evaluate potential VOC and PM emissions from composting facilities in Maricopa County, **2017.**
- Keynote speaker, McDowell Sonoran Conservancy Symposium, October, **2015.**
- Citizen Science coordinator, the CAP LTER – CAZCA Community Wildflower Survey, Spring **2015.**
- Keynote speaker: AZ Science Teachers Night at the Arizona Science Center, Phoenix, AZ. ‘Urban Ecology: Studying the Science of Home, January, **2012.**
- Invited speaker: Retired Bank of America Employees Luncheon, Tempe, AZ. ‘Global Environmental Change’, June, **2011.**
- Invited speaker: Girl Scouts of America, Lafayette, CA chapter (high school, grade 10). ‘Food and Sustainability’, June, **2010.** Students received a copy of Omnivore’s Dilemma (Michael Pollan) after the discussion.
- Invited panel moderator: ‘*21st Century Challenges for Conservation Biology*’, Central Arizona Chapter of the Society for Conservation Biology”, April, **2010.**
- Invited seminar speaker: McDowell Sonoran Conservancy: “*Atmospheric pollution impacts on the Sonoran Desert*”, May, **2008.**
- Invited guest lecturer: CAP LTER Ecoplexity summer teacher workshop: “*Soils and nitrogen cycling in urban ecosystems*”, June, **2007.**
- ASU Spotlight Faculty video: “*Long-term human impact on the landscape*” September, **2006.**
- Invited public lecture: Unitarian Universalist Church, Social Justice Committee, Surprise, AZ. “*Ecosystem consequences of global climate change.*” September, **2006.**
- Invited public lecture: National Association for Retired Federal Employees, Phoenix, AZ. “*Ecosystem Services in our Cities.*” June, **2006.**
- Interview: Science Matters Newsletter, EPA: with Eric Niiler, February, **2014.**
<http://epa.gov/sciencematters/>

- Interview: New York Times Magazine: “*Bloom Town: The Wild Life of American Cities*” by Maggie Koerth-Baker, December, **2012**. URL: <http://www.nytimes.com/2012/12/02/magazine/the-wild-life-of-american-cities.html>
- Interview: ASU News: “Study of 'forest killer' plant explores our vulnerability to rapid environmental change” by Julie Newberg, September **2012**. URL: https://asunews.asu.edu/20120921_Mikania
- Interview: Research Stories, ASU Office of Knowledge Enterprise Development. “*Finding Footprints*” by Pete Zrioka, December, **2010**. URL: <http://researchstories.asu.edu/stories/finding-footprints-1781>
- Interview: Discovery News, “*Nitric oxide and air quality*”, May, **2010**. <http://news.discovery.com/earth/kudzu-ozone-global-warming.html>
- Podcast, ‘Nitrogen and Habitats, Past and Future’, School of Life Sciences, Science Studio. URL: http://sols.asu.edu/podcasts/mp3_files/science_studio_vol_010.mp3
- Nature News, “*Attack of the Nitrogen Fixers*”, Nature (448): 514, August, **2007**.
- Conservation Magazine, Journal Watch Online: “*No Laughing Matter*”, July, **2007**; <http://journalwatch.conservationmagazine.org/2007/07/18/no-laughing-matter/>
- Interview: San Diego Tribune, September **2006**. “*Skyshapers: The rise (and sprawl) of urban America is changing the weather*” by Rick Lovett, San Diego Tribune; http://www.signonsandiego.com/uniontrib/20061012/news_lz1c12weather.html
- Interview: High Country News, June, **2006**. *Environmental consequences of urban land use in the US West*”
- Baltimore Sun, May 23, **2006**, “*Suburban Streams Important to Helping Bay Restoration*”, by Alex Dominguez, Associated Press.
- Press Conference: American Geophysical Union: “*Impacts of Urbanization on the Environment*.” Baltimore, May, **2006**.
- Television Interview (in both the lab and field): KAET-TV, ASU Research Review. “*Footprints that never disappear*”. February, **2006**.

MEMBERSHIPS & CERTIFICATIONS

- Ecological Society of America, 1995 – present.
- High School Teaching Certification, Grades 9-12, Biological Sciences.