

# SHARON JAE HALL

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## EDUCATION

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- 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

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### Research and Teaching

- 2017 Founders Day Faculty Achievement Award, ASU Alumni Association.
- 2003 John D. and Catherine T. MacArthur Professorship for excellence in teaching and scholarship, The Colorado College.
- 1998 Gresham Riley Post-Doctoral Fellowship, The Colorado College.
- 1996 NASA Earth Systems Science Doctoral Fellow
- 1994 NSF Graduate Research Fellow
- 1993 Doctoral Fellowship, Department of Soil Science, UC Berkeley.

### Teaching Award Nominations

- 2020 President's Professor, Arizona State University.
- 2018 Zebulon Pearce Distinguished Teaching Award, College of Liberal Arts & Sciences
- 2017 Outstanding Teaching Award, School of Life Sciences
- 2012/06 Centennial Professorship for excellence in teaching and community service, Associated Students of ASU

## CURRENT POSITIONS

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- **Professor**, School of Life Sciences, Arizona State University
- **Senior Sustainability Scientist**, Julie Ann Wrigley Global Institute of Sustainability
- **Undergraduate Professional Development and Faculty Advisor:**
  - **Founding Director and Faculty Advisor for Nature at ASU Undergraduate Professional Development Program. 2015-present.** Work closely with 6-8 student leaders per year to run an inclusive, student-driven peer mentoring career-preparedness and networking organization that reaches 200-300 undergraduate students annually with in-person events and newsletter. 30% of student leaders and members are from underrepresented minority groups. Informal training includes strategic planning and implementation, peer mentoring, marketing, and civic participation. Undergraduate career pages associated with Nature at ASU, the embedded peer

mentoring program Nature Guides, and the Hall Lab attract 100-500 users/month, <https://natureatasu.weebly.com> and <https://halllab.asu.edu/>.

- **School of Life Sciences Undergraduate Advising Faculty Liaison, and Faculty Lead for the Conservation Biology & Ecology major**, see our marketing video for the major here: <https://vimeo.com/164337919>. Work closely with SOLS Advising Office to develop and maintain the Conservation Biology & Ecology curriculum that serves ~300 undergraduate majors; develop “Career Pathways” materials for SOLS advisors and students. Promote and organize advising events (e.g. Conservation Biology and Ecology Community and Advising Night, SOLS Spark Camp for Freshman, SOLSmates mentoring night, Advisors meetings).
- **Faculty Advisor for the undergraduate-run Central Arizona Chapter of the Society for Conservation Biology**. Work with 5+ students leaders per year to reach 300-500 current and former undergraduate members with conservation biology skills-based training and career networking via in-person events and newsletter.
- **Faculty Advisor, Barrett Honors College, Conservation Biology & Ecology major**. Attend Barrett Honors College events to recruit students to the major and help them with thesis requirements and career preparedness.

## FORMER POSITIONS

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- **Director**, Environmental Life Sciences Ph.D. Program (2013-2019)
- **Science, Governing, and Editorial Boards**
  - Executive Boards: Central Arizona–Phoenix Long-term Ecological Research Program (CAP LTER; 2016-present); and ASU Global Drylands Center (2017-19)
  - Governing Board, Ecological Society of America, elected Member-At-Large (2016-18)
  - Science Advisory Boards: McDowell Sonoran Conservancy Field Institute, (2016-19); ASU Center for Biodiversity Outcomes (2016-2017); and ASU Life Science Ethics Program, (2017-19)
  - Journal Editorial Boards: Landscape and Urban Planning (Elsevier; 2015-2019)
- **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.
- **Biology and Ecology Instructor**, Monterey Bay Aquarium and Keystone Science School, Grades 7-Adult, 1990-93.

## PUBLICATIONS

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**In review** (\* = graduate student; \*\* = undergraduate)

1. J.M. Engebretson, K.C. Nelson, L.A. Ogden, K.L. Larson, J.M. Grove, **S.J. Hall**, D.H. Locke, D.E. Pataki, R. Roy Chowdhury, T.L.E. Trammell, P.M. Groffman. 2020. How the nonhuman world influences homeowner yard management in the American residential macrosystem. *Human Ecology*, in revision.
2. J. Padullés Cubino et al. 2020 (**S.J. Hall**, 12th author, \*one graduate student included). Taxonomic, phylogenetic, and functional composition and homogenization of residential yard vegetation with contrasting management, *Landscape and Urban Planning*, in revision.
3. \*J. Dai, D.A Roberts, D.A Stow, L. An, **S.J. Hall**, S.T. Yabiku, and P.C. Kyriakidis. 2020. Mapping understory invasive plant species with field and remotely sensed data in Chitwan, Nepal. *Remote Sensing of Environment*, in review.
4. K.L. Larson et al. 2020 (**S.J. Hall** 6th author, \*two graduate students included). Municipal Regulation of Residential Landscapes across US Cities: Patterns and Implications for Landscape Sustainability. *Journal of Environmental Management*, in review.

**Published** (\* = graduate student; \*\* = undergraduate)

1. 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. 2020. Urban soil carbon and nitrogen converge at a continental scale. *Ecological Monographs*, in press.
2. Padullés Cubino, J., C. Neill, D.E. Pataki, J.M. Grove, J. Cavender-Bares, K.L. Larson, K. Nelson, \*M. Wheeler, M.L. Avolio, P.M. Groffman, S. E. Hobbie, **S.J. Hall**, T.L.E. Trammell. 2020. Linking yard plant diversity to homeowners' landscaping priorities across the U.S. *Landscape and Urban Planning*, 196(103730).
3. K.L. Larson, E. Corley, \*R. Andrade, S.J. Hall, A. York, , D. Childers, P. Coseo, D. Hondula, and S. Meerow. 2019. Subjective evaluations of ecosystem services and disservices: an approach to creating and analyzing robust survey scales. *Ecology and Society*, 24(2):7.
4. T.L.E. Trammell, D.E. Pataki, C. J. Still, J.R. Ehleringer, M.L. Avolio, N. Bettez, J. Cavender-Bares, P.M. Groffman, J.M. Grove, **S.J. Hall**, J. Heffernan, S.E. Hobbie, K. L. Larson, J.L. Morse, C. Neill, K. C. Nelson, J. O'Neil-Dunne, W.D. Pearse, R. Roy Chowdhury, M. Steele, M.M. Wheeler. 2019. Climate and lawn management interact to control C<sub>4</sub> plant distribution in residential lawns across seven U.S. cities. *Ecological Applications*, 29(4): e01884.
5. Padullés Cubino, J. Cavender-Bares, S. E. Hobbie, D.E. Pataki, M.L. Avolio, L.E. Darling, K.L. Larson, **S.J. Hall**, P.M. Groffman, T.L.E. Trammell, M.K. Steele, J.M. Grove & C. Neill. 2019. Contribution of non-native plants to the phylogenetic homogenization of US yard floras. *Ecosphere* 10(3): e02638. <https://doi.org/10.1002/ecs2.2638>.
6. \*M.L. Word, **S.J. Hall**, B. Robinson, \*B. Manneh, A. Beye, and A.J. Cease. Soil-targeted interventions could alleviate locust and grasshopper pressure in West Africa. *Science of the Total Environment*. 2019. *Science of the Total Environment*, 663: 632-643. <https://doi.org/10.1016/j.scitotenv.2019.01.313>.
7. Padullés Cubino, J. Cavender-Bares, S. E. Hobbie, D.E. Pataki, M.L. Avolio, L.E. Darling, K.L. Larson, **S.J. Hall**, P.M. Groffman, T.L.E. Trammell, M.K. Steele, J.M. Grove & C. Neill. Drivers of plant richness and phylogenetic composition in urban yards at the continental scale. 2019. *Landscape Ecology*, <https://doi.org/10.1007/s10980-018-0744-7>.

8. B.A. Ball, \*\*M.P. Christman, and **S.J. Hall**. 2018. Nutrient dynamics during photodegradation of plant litter in the Sonoran Desert. *Journal of Arid Environments*, <https://doi.org/10.1016/j.jaridenv.2018.09.004>.
9. **S.J. Hall**, D.P. Huber, R. Flint Hughes. Invasion of Hawaiian rainforests by an introduced amphibian predator and N<sub>2</sub>-fixing tree increases soil N<sub>2</sub>O emissions. 2018. *Ecosphere*, 9(9).
10. \*D. Locke, C. Polsky, M. Avolio, T. Trammell, R.R. Chowdhury, J. M. Grove, J. Rogan, D.E. Martin, N.D. Bettez, J. Cavender-Bares, P. Groffman, **S.J. Hall**, J.B. Heffernan, , S.E. Hobbie, K.L. Larson, J. Morse, C. Neill, L. Ogden, J. O'Neill-Dunne, D. Pataki, W. Pearse, C. Polsky, M.M. Wheeler. 2018. A Multi-City Comparison of Front and Backyard Differences in Plant Species Diversity and Nitrogen Cycling in Residential Landscapes. *Landscape and Urban Planning*, 178:102-11.
11. \*J.R. Blaszczak, M.K. Steele, B.D. Badgley, J.B. Heffernan, S.E. Hobbie, J.L. Morse, E.N. Rivers, **S.J. Hall**, C. Neill, D. Pataki, P.M. Groffman, and E.S. Bernhardt. 2018. Sediment Chemistry of Urban Stormwater Ponds and Controls on Denitrification. *Ecosphere* 9(6): e02318. [doi.org/10.1002/ecs2.2318](https://doi.org/10.1002/ecs2.2318).
12. \*E.M Cook, R.A. Sponseller, N.B. Grimm, and **S.J. Hall**. 2018. Mixed method approach to assess atmospheric nitrogen deposition in arid and semi-arid ecosystems. *Environmental Pollution*, 239: 617-630.
13. W.D. Pearse, J. Cavender-Bares, S.E. Hobbie, M.L. Avolio, N. Bettez, R. Roy Chowdhury, L.E. Darling, P.M. Groffman, M. Grove, **S.J. Hall**, J.B. Heffernan, J. Learned, C. Neill, K.C. Nelson, D.E. Pataki, B.L. Ruddell, M.K. Steele, and T. Trammell. 2018. Homogenization of plant diversity, composition and structure in North American urban yards. *Ecosphere*,9(2).
14. 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. 2017. Ecological homogenization of residential macrosystems. *Nature Ecology and Evolution*. DOI: 10.1038/s41559-017-0191.
15. \*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. 2017. Continental-scale homogenization of residential lawn plant communities. *Landscape and Urban Planning*, 165:54-62.
16. \*A. Sullivan, A.M. York, D.D. White, **S.J. Hall**, and S.T. Yabiku. 2017. De jure versus de facto institutions: trust, information, and collective efforts to manage the invasive mile-a-minute weed (*Mikania micrantha*). *International Journal of the Commons*. 11(1):171-199.
17. \*A. Sullivan, A.M. York; L. An, S.T. Yabiku, and **S.J. Hall**. 2017. 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
18. M.R. McHale, **S.J. Hall**, A. Majumdar, and N.B. Grimm. 2017. 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.
19. \*H. Heavenrich and **S.J. Hall**. 2016. Elevated soil nitrogen pools after conversion of turfgrass to water-efficient residential landscapes. *Environmental Research Letters*, doi:10.1088/1748-9326/11/8/084007.
20. 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. 2016. Satisfaction, water and fertilizer use in the American residential macrosystem. *Environmental Research Letters*, 11: 034004.
21. 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. 2016. 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.
  22. **S.J. Hall**, J. Learned, B. Ruddell, K.L. Larson, J. Cavender-Bares, N. Bettez, P.M. Groffman, J.M. Grove, J.B. Heffernan, S.E. Hobbie, J.O. Morse, C. Neill, K.C. Nelson, J.P.M. O'Neil-Dunne, L. Ogden, D.E. Pataki, W.D. Pearse, C. Polsky, R. Roy Chowdhury, M.K. Steele, T.L.E. Trammell. 2016. 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.
  23. 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. 2015. Ecosystem services in managing residential landscapes: Priorities, value dimensions, and cross-regional patterns. *Urban Ecosystems*, DOI 10.1007/s11252-015-0477-1.
  24. \*\*M. Davis, \*E. Cook, S. Collins, and **S.J. Hall**. 2015. 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.
  25. \*Y. Marusenko, F. Garcia-Pichel, and **S.J. Hall**. 2015. Ammonia-oxidizing archaea respond positively to inorganic N addition in desert soils. *FEMS Microbiology Ecology*, 91(2):1-11.
  26. W.D. Shuster, S.D. Dadio, C.E. Burkman, S.R. Earl, and **S.J. Hall**. 2015. Hydropedological assessments of parcel-level infiltration in an arid urban ecosystem. *Soil Science Society of America Journal*, doi:10.2136/sssaj2014.05.0200.
  27. \*C. Zhang, X. Li, D. Niu, **S.J. Hall**, C. Wan. 2014. Effects of simulated nitrogen deposition on soil respiration components and their temperature sensitivities in a semiarid grassland. *Soil Biology and Biochemistry* 75, 113-123.
  28. C. Polsky, J.M. Grove, C. Knudson, P.M. Groffman, N. Bettez, J. Cavender-Bares, **S.J. Hall**, J.B. Heffernan, S.E. Hobbie, K.L. Larson, J.L. Morse, C. Neill, K.C. Nelson, L.A. Ogden, J. O'Neil-Dunne, D.E. Pataki, R. Roy Chowdhury and M.K. Steele. 2014. 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.
  29. M. K. Steele, J. B. Heffernan, N. Bettez, J. Cavender-Bares, P. M. Groffman, J. M. Grove, **S. Hall**, S. E. Hobbie, K. Larson, J. L. Morse, C. Neill, K. C. Nelson, J. O'Neil-Dunne, L. Ogden, D. E. Pataki, C. Polsky, R. Roy Chowdhury. 2014. Convergent surface water distributions in U.S. cities. *Ecosystems*, February: 1-13. doi: 10.1007/s10021-014-9751-y.
  30. P.M. Groffman, J. Cavender-Bares, N.D. Bettez, J.M. Grove, **S.J. Hall**, J.B. Heffernan, S.E. Hobbie, Kelli L Larson, Jennifer L Morse<sup>1</sup>, Christopher Neill, K. Nelson, Jarlath O'Neil-Dunne, L. Ogden, D.E. Pataki, C. Polsky, R. Roy Chowdhury, M.K. Steele. 2014. Ecological homogenization of urban America. *Frontiers in Ecology and the Environment*, 12(1): 74–81, doi:10.1890/120374.
  31. \*D.K. Nakase., A.S. Hartshorn, K.A. Spielmann, and **S.J. Hall**. 2014. Eolian deposition and soil fertility in a prehistoric agricultural complex in central Arizona. *Geoarchaeology*, 29: 79-97. doi 10.1002/gea.21463.
  32. **S.J. Hall**, \*J. Trujillo, \*D. Nakase, \*C. Strawhacker, \*M. Kruse-Peebles, \*H. Schaafsma, and J. Briggs. 2013. Legacies of prehistoric agricultural practices within plant and soil properties across an arid ecosystem. *Ecosystems*. doi 10.1007/s10021-013-9681-0.

33. \*Y. Marusenko, D.P. Huber, and **S.J. Hall**. 2013. Fungi mediate nitrous oxide production but not ammonia oxidation in arid and semi-arid soils. *Soil Biology and Biochemistry*, 63: 24-36.
34. C. Boone, \*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. 2012. *Urban Ecosystems*, DOI 10.1007/s11252-012-0240-9.
35. Sponseller, RA., **S.J. Hall**, D. Huber, N.B. Grimm, J.P. Kaye, C. Clark, and S. Collins. 2012. 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.
36. \*D. Niu, **S.J. Hall**, H. Fu, J. Kang, Y. Qin, and J.J. Elser. 2011. 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.
37. \*E. Cook, **S.J. Hall**, and K. Larson. 2011. Residential landscapes in an urban socio-ecological context: Multi-scalar drivers and legacies of management practices, ecological structure, and ecosystem services. 2011. *Urban Ecosystems*, DOI 10.1007/s11252-011-0197-0.
38. L.H. Pardo, M.E. Fenn, C.L. Goodale, L.H. Geiser, C.T. Driscoll, E.B. Allen, J.S. Baron, R. Bobbink, W.D. Bowman, C.M. Clark, B. Emmett, F.S. Gilliam, T.L. Greaver; **S.J. Hall**, E.A. Lilleskov, L. Liu, J.A. Lynch, K.J. Nadelhoffer, S.S. Perakis, M.J. Robin-Abbott, J.L. Stoddard, K.C. Weathers, R.L. Dennis. 2011. Effects of N deposition and empirical critical loads for nitrogen for ecoregions of the United States. *Ecological Applications*, DOI 10.1890/10-2341.1.
39. J.P. Kaye, S.E. Eckert, \*D.A. Gonzalez, J.O. Allen, **S.J. Hall**, R.A. Sponseller, and N.B. Grimm. 2011. Decomposition of urban atmospheric carbon in Sonoran Desert soils. *Urban Ecosystems*, DOI 10.1007/s11252-011-0173-8.
40. **S.J. Hall**, R.A. Sponseller, N.B. Grimm, D. Huber, J.P. Kaye, C. Clark, and S. Collins. 2011. Ecosystem response to nutrient enrichment across an urban airshed in the Sonoran Desert. *Ecological Applications*, 21(3): 640-660.
41. \*Y. Marusenko, P. Herckes, and **S.J. Hall**. 2011. 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.
42. K.L. Larson, \*E. Cook, \*C. Strawhacker, and **S.J. Hall**. 2010. 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.
43. \*R. Davies and **S.J. Hall**. 2010. 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.
44. **S.J. Hall** and P.J. Marchand. 2010. 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.
45. **S.J. Hall**, \*\*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.
46. **S.J. Hall** 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*, 68 (4): 453-462.
47. **S.J. Hall**, D. Huber, and N.B. Grimm. 2008. Soil N<sub>2</sub>O and NO<sub>x</sub> emissions from an arid urban ecosystem. *Journal of Geophysical Research-Biogeosciences*, (113) G1, G01016
48. \*M.M. McCrackin, \*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.

49. **S.J. Hall** and G.P. Asner. 2007. Biological invasions alter regional N-oxide emissions in Hawaiian rain forests. *Global Change Biology*, (13) 10, 2143-2160.
50. S. Pfirman, **S.J. Hall**, and T. Tietenberg. 2005. Environmental programs: Liberal arts colleges and interdisciplinary education. *Environmental Science & Technology*, 39 (10): 221A-224A.
51. **S.J. Hall**, G. Asner and K. Kitayama. 2004. Land use, climate, and substrate controls over soil dynamics and N-oxide emissions in Borneo. *Biogeochemistry*, 70(1): 27-58.
52. **S.J. Hall** and P.A. Matson. 2003. Nutrient status of tropical rain forests influences soil N dynamics after N additions. *Ecological Monographs*, 73(1): 107-129.
53. P. Matson, K. Lohse, and **S.J. Hall**. 2002. The globalization of nitrogen deposition: consequences for terrestrial ecosystems. *Ambio*, 31(2): 113-119.
54. **S.J. Hall** and P.A. Matson. 1999. Nitrogen oxide emissions after nitrogen additions in tropical forests. *Nature*, 400 (6740): 152-155.
55. **S.J. Hall**, P.A. Matson, and P.M. Roth. 1996. NO<sub>x</sub> Emissions from soil: Implications for air quality modeling in agricultural regions. *Annual Review of Energy and the Environment*, 21: 311-46.
56. P.A. Matson, 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.
57. J.A. Coyer and **S.J. Hall**. 1993. Predation on small northern anchovy (*Engraulis mordax*) by large silversides (*Atherinidae*). *California Fish and Game* 79(2): 82-84.

**Published book chapters** (\* = graduate student; \*\* = undergraduate)

1. K.A. Spielmann, **S.J. Hall**, \*M. Kruse-Peebles, \*D. Nakase, and \*J. Trujillo. 2015. 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*. USC Press.
2. **S.J. Hall**. Soil and the Future of Food: Challenges and Opportunities for Feeding 9 Billion People. 2014. *In: The Soil Underfoot: Infinite Possibilities for a Finite Resource*, CRC Press. G. Churchman and E. Landa (eds).
3. K.A. Spielmann, \*H. Schaafsma, J. Briggs, **S.J. Hall**, and \*M. Kruse. 2011. 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 p..
4. **S.J. Hall**. Empirical Critical Loads of Nitrogen for US Ecoregions: Tropical and subtropical humid forests. 2010. 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://treesearch.fs.fed.us/pubs/38109>
5. **S.J. Hall** 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.

**Published reports, white papers, and datasets** (\* = graduate student; \*\* = undergraduate)

1. \*\*Holmes C., **S.J. Hall**. 2019. Trace Metal Content of Community Garden Soils in Metro Phoenix, AZ. Environmental Data Initiative.  
<https://doi.org/10.6073/pasta/6ff7ea2732e8fc3a0418b56d9c7859c8>

2. \*\*J. Givens and **S.J. Hall**. 2018. Nature at ASU, 2016-18 Inaugural Report. Arizona State University, Tempe, AZ. <http://halllab.asu.edu/annual-report/>.
3. \*\*C. Holmes, H. Heavenrich, E. Shock, and **S.J. Hall**. 2018. Trace Metal Content of Community Garden Soils and Plants in metro Phoenix, AZ. Report prepared for a coalition of community gardens in metro Phoenix.
4. \*K. Hooton, S. Giannakorous, W. Campbell, M.H. Friedman, J. Groeneveld, L. Steger, and **S.J. Hall**. 2018. **Ozone Precursor, Particulate Matter and Particulate Matter Precursor Emissions from Composting Operations**: A Literature Review and Estimates Report Prepared for the Maricopa County Air Quality Department. 68 pp.
5. \*E. Cook, C. Boone, **S.J. Hall**, and M. Nation. 2009. Urban long-term research across a Southwest socio-ecological gradient. A White Paper prepared for the US Forest Service Southwest Research Station.
6. K.L. Larson, **S.J. Hall**, \*E. Cook, \*B. Funke, \*C. Strawhacker, and \*V. Turner. 2008. 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.
7. **S.J. Hall**, S. Pfirman, and T. Titenberg. 2005. Environmental Programs at Liberal Arts Colleges. Findings and Recommendations for the Andrew W. Mellon Foundation. URL: <http://www.pkal.org/documents/EnvironmentalPrograms.pdf>

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CONFERENCE PRESENTATIONS (★award-winning; \*graduate student; \*\*undergraduate)

2020

- \*\*Bing, I., K. Ragan, and **S.J. Hall**. Water presence along washes in Los Ojos, Sonora, Mexico. 2020 WAESO (Western Alliance to Expand Student Opportunities) Undergraduate Research Conference, Tempe, AZ, March 2020.
  - \*\*Renteria, K., M. Clark, and **S.J. Hall**. Impacts of invasive plant species on culturally important plants in a biodiversity hotspot. 2020 WAESO (Western Alliance to Expand Student Opportunities) Undergraduate Research Conference, Tempe, AZ, March 2020.
  - \*\*Rodriguez-Garcia, R., K. Ragan, and **S.J. Hall**. Relationship between animal presence and water presence in washes in Sonora, Mexico. 2020 WAESO (Western Alliance to Expand Student Opportunities) Undergraduate Research Conference, Tempe, AZ, March 2020.
  - \*\*Kenney, D., K. Ragan, and **S.J. Hall**. Water presence in washes after storms in semi-arid Sonora, Mexico. 2020 WAESO (Western Alliance to Expand Student Opportunities) Undergraduate Research Conference, Tempe, AZ, March 2020.
  - ★\*\*Fleeger, M., K.L. Larson, M.M. Wheeler, R. Andrade, J.A. Brown, S.B. Lerman, **S.J. Hall**, and D.L. Narango. Who is abuzz about bees? Explaining residents' attitudes in Phoenix, Arizona. 22st Annual All Scientists Meeting of the CAP LTER, Tempe, AZ. January 2020.
  - ★\*Wheeler, M.M., K.L. Larson, E.M. Cook, and **S.J. Hall**. Change over time in privately-managed residential vegetation: Resident actions promote dynamic plant communities. 22st Annual All Scientists Meeting of the CAP LTER, Tempe, AZ. January 2020.
  - \*Haight, J.D., **S.J. Hall**, and J.S. Lewis. Species richness of mammals and terrestrial birds across a gradient of urbanization in central Arizona. 22st Annual All Scientists Meeting of the CAP LTER, Tempe, AZ. January 2020
- Brown, J.A., A.J. Basile, H.L. Bateman, S.B. Lerman, P.S. Warren, P. Deviche, and K. Sweazea. No fry zones: Birds' response to restaurant distributions in the Phoenix metropolitan area. 22st



Annual All Scientists Meeting of the CAP LTER, Tempe, AZ. January 2020.

2019

- D. Narango, S. Lerman, P. Groffman, M. Avolio, J. Cavendar-Bares, M. Grove, **S.J. Hall**, J. Heffernan, S. Hobbie, J. Morse, C. Neill, D. Pataki, T. Trammell. Patterns of local and landscape scale management on urban bird communities across six major metropolitan areas: Do yards matter? American Ornithological Society, Albuquerque, NM. June 2019.
- \*M. Clark, **S.J. Hall**, and M. Shrestha. Perceptions of Invasive Plants: A Case-study from Sub-tropical Nepal. Society for Applied Anthropology. Portland, OR. March 2019.
- \*M.M. Wheeler, K.L. Larson, **\*\*D. Bergman**, and **S.J. Hall**. Dynamics of social drivers of native plant abundance in privately managed urban landscapes. International Association for Landscape Ecology. Fort Collins, CO. April, 2019.
- \*J.D. Haight, **S.J. Hall**, and J.S. Lewis. Underrepresentation of community approaches in the study of urban small mammals. International Urban Wildlife Conference, Portland, OR. June, 2019.
- \*K.C.B. Weiss, \*C.A. Ray, J. Schipper, and **S.J. Hall**. Defining Mammalian Functional Traits in Urban Landscapes. International Urban Wildlife Conference, Portland, OR. June, 2019.
- \*\*M. Fleeger**, K.L. Larson, \*M.M. Wheeler, R. Andrade, and **S.J. Hall**. Attitudes toward pollinators in residential landscapes of metropolitan Phoenix, Arizona. 21st Annual All Scientists Meeting of the CAP LTER, Tempe, AZ. January 2019.
- \*K.C.B. Weiss, C.A. Ray, J. Schipper, and **S.J. Hall**. Conceptual methods for the definition of mammalian functional traits in urban landscapes. 21st Annual All Scientists Meeting of the CAP LTER, Tempe, AZ. January 2019.
- \*\*D.N. Bergman**, \*M.M. Wheeler, K.L. Larson, and **S.J. Hall**. Do attitudes towards native flora predict landscaping choices in privately managed urban landscapes?
- \*E.M. Cook, P.E. Padgett, and S.J. Hall. Desert herbaceous composition impacted by co-occurring pollutants in urban ecological airshed. 21st Annual All Scientists Meeting of the CAP LTER, Tempe, AZ. January 2019

2018

- R. Manandhar, M.D. Clark, **S.J. Hall**, S. Yabiku, S. Murphy, and D. Ghimire. Land managers drive plant community dynamics: Assessing a low-technology intervention to control *Mikania micrantha* in the community forests of Chitwan, Nepal. 2018 Mountains in a Changing World Conference, Kathmandu, Nepal.
- \*M.M. Wheeler, K.L. Larson, E.M. Cook and **S.J. Hall**. Land managers drive plant community dynamics: A case study of change over time in Phoenix residential neighborhoods. 2018 Meeting of the Ecological Society of America, New Orleans, LA.
- \*K.C.B. Weiss, R. Lipfert, T. Sprague, J. Schipper and **S.J. Hall**. Mammal community composition and connectivity through an urban corridor. 2018 Meeting of the Ecological Society of America, New Orleans, LA.
- \*M.D. Clark, Q. Zhao, R. Manandhar, \*A.V. Sullivan, A.M. York, D.J. Ghimire, S.T. Yabiku and **S.J. Hall**. Social and ecological drivers of invasive plant species distribution in community forests of subtropical Nepal. 2018 Meeting of the Ecological Society of America, New Orleans, LA.
- \*\*C. Beauclaire Reyes**, **\*\*A. Bailey**, L. Steger, M.M. Wheeler, and **S.J. Hall**. Plant species diversity and community composition of alternative yards in Phoenix, AZ. 2018 CAP LTER All Scientists Meeting, Tempe, AZ.
- \*\*C. Ribeiro**, M.M. Wheeler, L. Steger, and **S.J. Hall**. Shrubs alter patterns of inorganic nitrogen

availability in native desert parks across metropolitan Phoenix. 2018 CAP LTER All Scientists Meeting, Tempe, AZ.

- ★\*M.M. Wheeler, S.L. Collins, N.B. Grimm, C. Clark, R.A. Sponseller, E.M. Cook, and **S.J. Hall**. Nutrient enrichment alters annual plant community composition in the northern Sonoran Desert. 2018 CAP LTER All Scientists Meeting, Tempe, AZ.

2017

J.M. Grove, K.L. Larson, P. M. Groffman, **S.J. Hall**, D. Locke, A. York, S.B. Lerman. The new American farmers and foresters: Residential lands and their owners as the new stewards of American lands. 2017 Meeting of the Ecological Society of America, Portland, OR

- \*M.M. Wheeler, S.L. Collins, N.B. Grimm, C. Clark, R.A. Sponseller, E.M. Cook, and **S.J. Hall**. Global change in the desert: Effects of increased nitrogen on diverse annual plant communities. 2017 Meeting of the Ecological Society of America, Portland, OR.
- \*\*C. Holmes, H. Heavenrich, and **S.J. Hall**. Trace Metal Content of Community Garden Soils in metro Phoenix, AZ. 2017 Southwest Agricultural Summit, Yuma AZ.
- ★\*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.
- \*\*H.J. Carrillo Hernandez, M.D. Clark, and **S.J. Hall**. 2017. Bridging the Gap Between Employer Expectations and University Curricula for Undergraduate Students in Conservation Science. Annual Research Conference for the Western Alliance to Expand Student Opportunities (WAESO) Program, Tempe, AZ, March 2017.
- \*\* J. Givens and **S.J. Hall**. 2017. Building a Diverse Undergraduate Community in Sustainability and Conservation Science. Annual Research Conference for the Western Alliance to Expand Student Opportunities (WAESO) Program, Tempe, AZ, March 2017.

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.
- S.J. Hall** and \*\*C. Holmes. Trace metals in community gardens in metro Phoenix. Desert Ag Conference, Gilbert, AZ.
- T.L.E. Trammell, D.E. Pataki, P.M. Groffman, N. Bettez, J.L. Morse, J. Cavender-Bares, J.M. Grove, **S.J. Hall**, J. Heffernan, S.E. Hobbie, C. Neill, K.C. Nelson, L.A. Ogden. Soil nitrogen isotope composition in residential lawns across six U.S. cities. Soil Science Society of America Conference, Phoenix, AZ, October 2016.
- \*M. Clark, S. Yabiku, and **S.J. Hall**. Evaluating the effects of *Mikania micrantha* on plant species richness and diversity throughout invaded community forests in the buffer zone of Chitwan National Park, Nepal. 2016 Ecological Society of America conference, Ft. Lauderdale, FL.
- \*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.
- \*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.

**\*\*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.

**★\*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.

**\*\*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

J. Learned and **S.J. Hall.** Residential Landscape Microclimates Mitigate the UHI in Cities across the US. American Geophysical Union Annual Meeting, San Francisco, CA.

**S.J. Hall, J. Learned, B. Ruddell, \*\*C. Holmes, K. Larson, J. Cavender-Bares, N. Bettez, P.M. Groffman, J.M. Grove, J.B. Heffernan, S.E. Hobbie, J.L. Morse, C. Neill, K.C. Nelson, J. O'Neill-Dunne, L. Ogden, D.E. Pataki, W.D. Pearse, C. Polsky, R. Roy Chowdhury, and M.K. Steele.** Convergence of local climate in outdoor home environments across diverse ecoregions of the United States. 2014 Annual Meeting of the Ecological Society of America, August, Sacramento, CA.

W.D. Pearse, J. Cavender-Bares, S.E. Hobbie, M.L. Avolio, N. Bettez, R. Roy Chowdhury, L.E. Darling, P.M. Groffman, M. Grove, **S.J. Hall, J.B. Heffernan, J. Learned, C. Neill, K.C. Nelson, D.E. Pataki, B.L. Ruddell, M.K. Steele, and T. Trammell.** 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.

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.

**\*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.

**\*\*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.

**\*\*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.

**\*\*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.

**\*\*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.

**\*H. Heavenrich and S.J. Hall.** Hidden pools of nitrate in emerging sustainable landscapes. 2014 CAP LTER All Scientists Meeting, Tempe, AZ.

**★\*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.

S.T. 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.
- 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.
- \*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.
- ★\*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.
- ★\*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.
- 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.
- \*\*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.
- \*\*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.
- \*\*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.
- ★\*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.
- \*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.
- \*\*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.
- ★\*\*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.
- ★\*\*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.
- \*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.

- \*\*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.
- \*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.
- \*M. Kruse-Peebles, \*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-Peebles, 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.
- \*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.
- \*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 N<sub>2</sub>O production in arid and semi-arid ecosystems. 2009 LTER All Scientists Meeting, Estes Park, Colorado.
- \*Y. Marusenko, P. Herckes, and **S.J. Hall**. Fate of PAH compounds in an arid city. 2009 LTER All Scientists Meeting, Estes Park, Colorado.
- 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.
- \*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.
- \*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.
- \*\*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.
- 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.
- \*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.

- ★\*Y. Marusenko, P. Herckes, and **S.J. Hall**. Fate of PAH compounds in an arid city. 10<sup>th</sup> Annual GELSS Symposium (Graduates in Earth, Life, and Social Sciences), February, Tempe, AZ.
- ★\*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. 11<sup>th</sup> Annual Poster Symposium of the Central Arizona-Phoenix Long-Term Ecological Research project, Tempe, AZ.

2008-05

- 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 Ecological Society of America, Aug., Milwaukee, WI.
- \*E. Cook, **S.J. Hall**, and K.L. Larson. Drivers of residential landscape structure and functioning: a literature review and synthesis. 2008 Ecological Society of America, August, Milwaukee, WI.
- K.L. Larson, **S.J. Hall**, \*E. Cook, and \*\*J. Vittall. Exploring social and ecological aspects of residential landscapes in metropolitan Phoenix, AZ. 14<sup>th</sup> International Symposium on Society and Resource Management, June, Burlington, VT.
- 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. 18<sup>th</sup> Conference on Atmospheric Biogeosciences, April, Orlando, Florida.
- ★\*E. Cook, **S.J. Hall**, and K.L. Larson. Drivers of residential landscape structure and functioning: a literature review and synthesis. 9<sup>th</sup> Annual GELSS Symposium (Graduates in Earth, Life, and Social Sciences), February, Tempe, AZ.
- 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
- 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.
- \*R. Davies and **S.J. Hall**. Effects of native urban landscape restoration on belowground ecological processes. 2007 Ecological Society of America, August, San Jose, California.
- \*T. Ontl, \*H. Schaafsma, J. Briggs, and **S.J. Hall**. Legacies of prehistoric agriculture on herbaceous plant community composition in a desert grassland. 2007 Ecological Society of America, August, San Jose, California.
- 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. 2006 XIV International Conference of the Society for Human Ecology, October, Estes Park, CO.
- R. Sponseller, **Hall, S.J.**, N.B. Grimm, J. Kaye, J. Allen, D. Huber, \*J. Riddell, Q. Stewart, C. Kochert, and \*\*A. Ghimire. 2006 All Scientists Meeting, Long-term Ecological Research Program, Estes Park, CO. *The urban atmosphere alters ecosystem processes in the Sonoran Desert*
- S.J. Hall**, N.B. Grimm, and R. Sponseller. Ecosystem responses to the urban atmosphere in the Sonoran Desert: Initial patterns. 2006 Ecological Society of America Annual Meeting, Memphis, TN.
- 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 N<sub>2</sub>O and NO<sub>x</sub> fluxes in Hawai'i Volcanoes National Park. 2005 Ecological Society of America Annual Meeting, Montreal, Canada.
- \*\*C. O'Brady, \*\*J. Creveling, and **S.J. Hall**. Neighborhood effects of N-fixing *M. faya* on

understory plant nutrients and soil N cycling. 2005 Ecological Society of America Annual Meeting, Montreal, Canada.

2004-1989

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*. 2004 Ecological Society of America Annual Meeting, Portland, Oregon.

**\*\*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*. 2004 Ecological Society of America Annual Meeting, Portland, Oregon.

Grimm, N.B., J.P. Kaye, **S.J. Hall**, J.O. Allen, and D.B. Lewis. *A distinct urban biogeochemistry?* 2004 Ecological Society of America Annual Meeting, Portland, Oregon.

**S.J. Hall**, *Factors controlling nitrification in tropical soils*. 2003 Ecological Society of America Annual Meeting, Savannah, Georgia.

**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<sub>x</sub> emissions and uptake by urban soils*. The 2002 4th Annual Symposium of the Central Arizona-Phoenix Long-Term Ecological Research project, Tempe, AZ.

**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*. 2001 Ecological Society of America Annual Meeting, Madison, Wisconsin.

**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*. 1998 Ecological Society of America Annual Meeting, Baltimore, Maryland.

**Hall, S.J.** and P.A. Matson. *Factors controlling N gas losses in nitrogen fertilized N and P-limited Hawaiian rain forests*. 1997 Ecological Soc. of America Annual Meeting, Albuquerque, NM.

**★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*. 1996 Ecological Society of America Annual Meeting, Providence, Rhode Island.

Ruehl, W., **S. Hall**, H. Rothermel and R. Moorhead. *Comparative Clinical Pathology of Retroviral Infections in Cats and People*. 1990 Proceedings of the Annual Meeting of the American College of Veterinary Pathologists, Phoenix, Arizona.

Ruehl, W.W. and **S.J. Hall**. *Clinical Signs, Laboratory Abnormalities and Survival of Western Cats with Antibodies to FIV*. 1990 Proceedings of the Annual Meeting of the American College of Veterinary Internal Medicine, Washington D.C.

**Hall, S.J.** *Intertidal Movements of the Woolly Sculpin, Clinocottus analis*. Hopkins Marine Station Spring Papers. 1989 China Point Symposium, Hopkins Marine Station, Monterey, CA.

## COURSES TAUGHT

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- Current undergraduate courses (# students/year)
  - Conservation of Biodiversity (~200), face-to-face and ASU Online
  - Nature Guides: Peer Mentoring in Conservation Biology & Ecology (~5-10)
- Current graduate courses (# students/year)
  - Grand Challenges in Environmental Life Sciences (~10)

- Other ASU courses (# students/year)
  - 2016-2011: Ecosystem Ecology (40-60) - *Undergraduate/graduate*
  - 2017: Sustainability Challenges of the Wildlife Economy in S. Africa (11) - *Undergraduate*
  - 2011-2008: Biology & Society (~100-200) - *Undergraduate*
  - 2005: Introduction to Environmental Science (75) - *Undergraduate*
  - 2005-06, 2008, 2010, 2012: Soil Ecology (10-20) - *Undergraduate/graduate*
  - 2007: Socio-ecology of Residential Landscapes (5) - *Graduate*
- Guest Instructor (# students): Methods in Conservation Biology and Ecology (20); Earth's Critical Zone (15); The Global Classroom (15); Sustainable Ecosystems (40); Society and the Environment (15)
- Colorado College courses (1999-2005): Introduction to Environmental Science; Biogeochemistry; Earth Science; Sustainable Cities; Introduction to Ecology; and Environmental Statistics
- University of Colorado courses (2000-01): Society and Earth Science; and Biogeochemistry

## COMMUNITY EMBEDDEDNESS

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### Science advisor for local government offices and non-profits

- Author/Advisor, Metro Phoenix Community Garden Collective, “Trace Metal Content of Community Garden Soils and Plants in Metropolitan Phoenix, AZ”. 2018. Technical report.
- Author/Advisor, Maricopa County Air Quality Department, “Evaluation of Ozone and PM Precursor Emissions from Composting Facilities in Maricopa County”. 2017. Technical report.
- Science Advisory Board, McDowell Sonoran Conservancy Field Institute, 2016-present
- Principal Investigator and Citizen Science Coordinator, Community Wildflower Survey of the Central Arizona Conservation Alliance, 2015.

### Community outreach

- Keynote speaker: McDowell Sonoran Conservancy Symposium, October, 2015.
- Keynote speaker: Arizona 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: ‘21<sup>st</sup> 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.

### Press and media interviews

- Founders Day Teaching Achievement Award, <https://vimeo.com/214899932>
- Television Interview (in both the lab and field): Arizona PBS. “Urbanization, Wildlife, and Sonoran Desert Conservation”. April, 2018. <https://azpbs.org/catalyst/2018/09/catalyst-desert-animals-in-urban-centers/>
- Interview: Science Matters Newsletter, EPA: with Eric Nüiler, February, 2014.
- 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](https://asunews.asu.edu/20120921_Mikania)
- Interview: Research Stories, ASU Office of Knowledge Enterprise Development. “*Finding Footprints*” by Pete Zrioka, December, 2010. URL: <https://research.asu.edu/stories/read/finding-footprints>
- Interview: Discovery News, “*Nitric oxide and air quality*”, May, 2010.
- Podcast, ‘Nitrogen and Habitats, Past and Future’, School of Life Sciences, Science Studio.
- Nature News, “*Attack of the Nitrogen Fixers*”, Nature (448): 514, August, 2007.
- Conservation Magazine, Journal Watch Online: “*No Laughing Matter*”, July, 2007
- San Diego Tribune, September 2006. “*Skyscrapers: The rise (and sprawl) of urban America is changing the weather*” by Rick Lovett, San Diego Tribune; <http://legacy.sandiegouniontribune.com/news/science/20061012-9999-lz1c12weather.html>
- 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

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- Participant, ASU Leadership Academy, 2015.
- Current member of the Ecological Society of America, the Society for Conservation Biology; and the Wildlife Society.
- High School Teaching Certification, Grades 9-12, Biological Sciences.