# Stephen E. Fick

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## Education:

**Ph.D. in Ecology** *2016*
*Department of Plant Sciences, University of California, Davis*

**B.S. Biology**, **B.A. Archaeology** - *Summa cum laude* *2008*
*Wheaton College; Wheaton, Illinois*

## Appointments:

**Postdoctoral Researcher** *2018 - present*
*US Geological Survey, Southwest Biological Science Center, Moab UT*
*University of Colorado, Boulder and New Mexico State University*

**Research Fellow** *2016 – 2018*
*Stockholm Environment Institute, Stockholm, Sweden*

**Subject Matter Consultant Expert, Ecology** 2017-present
*Plant Editors Scientific Editing Service*

## Grants, Fellowships and Awards

**USGS Land Change Science Grant** ($25,500) 2019
*US Geological Survey, Washington DC*

**NRCS Soil Survey Collaborative Research Grant** ($154,936) *2018*
*National Resource Conservation Service, Ft. Collins, CO*

**Henry A. Jastro Research Fellowship (**$2,250**)** *2014*
*Ecology Awards Committee, University of California, Davis*

**Ben A. Madson Scholarship (**$500**)** *2013*
*Dept. Plant Sciences, University California, Davis*

**Ecology Fellowship** ($60,000) 2011
*University of California, Davis*

**Plant Sciences Departmental Assistantship Award** ($30,000) 2012-2013
*University of California, Davis*

**Scholastic Honor Society** *2008*
*Wheaton College; Wheaton, Illinois*

## Peer-Reviewed Publications

Koontz, M.J., M.P. North, C.M. Werner, **S.E. Fick**, A.M. Latimer. 2020. Local forest structure variability increases resilience to wildfire in dry western US Coniferous forests. Ecology Letters. 10.1111/ele.13447

**Fick**, S. E., J. Belnap, and M. C. Duniway. 2020. Grazing-Induced Changes to Biological Soil Crust Cover Mediate Hillslope Erosion in a Long-Term Exclosure Experiment. Rangeland Ecology & Management 73:61-72.

Green, J.H, S.A. Croft, A.P. Duran, A. Balmford, N.D. Burgess, **S.E. Fick**, T. Gardner, J. Godar, C. Suavet, M. Virah-Sawmy, L. Young, C.D. West. 2019. Linking global drivers of agricultural trade to on-the-ground impacts on biodiversity. PNAS 116:23202-23208

**Fick**, S. E., N. Day, S. Hoy-Skubic, N. Barger, M. C. Duniway. 2019. Microsite enhancements for soil stabilization and rapid biocrust colonization in degraded drylands. Restoration Ecology. https://doi.org/10.1111/rec.13071

**Fick**, S. E., N. N. Barger, J. Tatarko, and M. C. Duniway. 2019. Induced biological soil crust controls on wind erodibility and dust (PM10) emissions. Earth Surface Processes and Landforms. https://doi.org/10.1002/esp.4731

**Fick**, S. E., N. Barger, and M. Duniway. 2019. Hydrological function of rapidly induced biocrusts. Ecohydrology: e2089.

Duniway, M. C., A. A. Pfennigwerth, S. E. **Fick**, T. W. Nauman, J. Belnap, and N. N. Barger. 2019. Wind erosion and dust from US drylands: a review of causes, consequences, and solutions in a changing world. Ecosphere 10:e02650.

Winkler, D. E., D. M. Backer, J. Belnap, J. B. Bradford, B. J. Butterfield, S. M. Copeland, M. C. Duniway, A. M. Faist, S. E. **Fick**, S. L. Jensen, A. T. Kramer, R. Mann, R. T. Massatti, M. L. McCormick, S. M. Munson, P. Olwell, S. D. Parr, A. A. Pfenningwerth, A. M. Pilmanis, B. A. Richardson, E. Samuel, K. See, K. E. Young, and S. C. Reed. 2018. Beyond traditional ecological restoration on the Colorado Plateau. Restoration ecology 26:1055–1060.

Gardner, T., M. Benzie, J. Börner, E. Dawkins, S. **Fick**, R. Garrett, J. Godar, A. Grimard, S. Lake, R. Larsen, N. Mardas, C. McDermott, P. Meyfroidt, M. Osbeck, M. Persson, T. Sembres, C. Suavet, B. Strassburg, A. Trevisan, C. West, and P. Wolvekamp. 2018. Transparency and sustainability in global commodity supply chains. World Development.

Lusher, L., C. He, and S. **Fick**. 2018. Are professional basketball players reference-dependent? Applied Economics 50:3937–3948.

Morales, L. V., C. S. Sevillano-Rios, S. **Fick**, and T. P. Young. 2018. Differential seedling regeneration patterns across forest–grassland ecotones in two tropical treeline species (Polylepis spp.). Austral Ecology 43:514–526.

**Fick**, S. E., and R. R. Evett. 2018. Distribution modelling of pre-Columbian California grasslands with soil phytoliths: New insights for prehistoric grassland ecology and restoration. PloS one 13:e0194315.

Hedlund, J., S. **Fick**, H. Carlsen, and M. Benzie. 2018. Quantifying transnational climate impact exposure: New perspectives on the global distribution of climate risk. Global Environmental Change 52:75–85.

**Fick**, S. E., and R. J. Hijmans. 2017. WorldClim 2: new 1-km spatial resolution climate surfaces for global land areas. International Journal of Climatology 37:4302–4315.

Persson, L., S. Karlsson-Vinkhuyzen, A. Lai, Åsa Persson, and **S. Fick**. 2017. The Globally Harmonized System of Classification and Labelling of Chemicals—Explaining the Legal Implementation Gap. Sustainability 9:2176.

Stuble, K. L., **S. E. Fick**, and T. P. Young. 2017. Every restoration is unique: testing year effects and site effects as drivers of initial restoration trajectories. Journal of Applied Ecology 54:1051–1057.

**Fick**, S. E., C. Decker, M. C. Duniway, and M. E. Miller. 2016. Small-scale barriers mitigate desertification processes and enhance plant recruitment in a degraded semiarid grassland. Ecosphere 7:e01354.

Young, D. J., L. M. Porensky, K. M. Wolf, **S. E. Fick**, and T. P. Young. 2015. Burning reveals cryptic plant diversity and promotes coexistence in a California prairie restoration experiment. Ecosphere 6:1–11.

Young, T. P., E. P. Zefferman, K. J. Vaughn, and **S. Fick**. 2015. Initial success of native grasses is contingent on multiple interactions among exotic grass competition, temporal priority, rainfall and site effects. AoB Plants 7.

Zefferman, E., J. T. Stevens, G. K. Charles, M. Dunbar-Irwin, T. Emam, **S. Fick**, L. V. Morales, K. M. Wolf, D. J. Young, and T. P. Young. 2015. Plant communities in harsh sites are less invaded: a summary of observations and proposed explanations. AoB Plants 7.

## Teaching:

***Teaching Assistant***

*University of California, Davis*

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| **Multivariate Statistics** *(Graduate-level)* | *2015* |
| ***Quantitative Geography*** *(Graduate-level)* | *2014, 2015* |
| ***Principles of Ecology and Evolution*** | *2013, 2014* |

## Selected Presentations

**Fick, Stephen E.** 2018**.** Assessing the development and function of rapidly-restored biological soil crusts. Annual Conference of the Society for Ecological Restoration – Southwest Chapter. Flagstaff, AZ

**Fick, Stephen E.** 2018. Rangeland Restoration and Dust Mitigation on the Colorado Plateau. Soil and Water Conservation Society Annual Conference. Albuquerque, NM

**Fick, Stephen E.** 2017**.** Distribution Modeling of Pre-Columbian California Grasslands with Soil Phytoliths: New Insights for Restoration and Prehistoric Grassland Ecology. Natural Areas Conference, Ft Collins, CO.

**Fick, Stephen E**. 2012. Grazing Legacies and Grassland Restoration in Canyonlands National Park. Oral Presentation. Four Corners School field day. July 20, 2012.

**Fick, Stephen E**. 2008. "Subsistence Strategies for Marginalized Farmers in Northern Thailand". Wheaton College Human Needs Global Resources Symposium.

## Outreach/ Service

**Co- Organizer, Canyon Country Restoration Working Group** 2019
*Society for Ecological Restoration SW chapter*

**Treasury Advisory Committee, UC Davis Graduate Student Association** 2015

**Assistant teacher, The Biology Undergraduate Scholars Program (BUSP)** *2015*
*University of California, Davis (http://www.busp.ucdavis.edu/)*

- Helped teach a two-week intensive course preparing at-risk students interested in biology for their sophomore-year biology classes.

**Mentor, Student and Landowner Education and Watershed Stewardship Program** 2011-2016
*Center for Land Based Learning, Winters, CA*

- Supervise and mentor high-school students in an ongoing local restoration projects
- Facilitate interpretive activities to make connections between day-to-day activities and ecosystem health

**Certificate, UC Davis Graduate Teaching Association, "Diversity in the Classroom"** 2012
*University of California, Davis*

**Lab Safety Manager** 2011-2016

*Young Lab, UC Davis*

**Representative, Graduate Student Association** *2011-2012*
*University of California, Davis*

**Intern, Human Needs Global Resources (HNGR)** 2008
*Upland Holistic Development project;* Fang, Thailand / *Wheaton College;* Wheaton, Illinois

- Six-month immersive service-learning internship and research project studying poverty and community development in the Global South.

## Media

"Climbers Relationship with Place" Interviewed by Kristina Young on KZMU's Science Moab. May 19, 2019. URL: https://www.kzmu.org/the-science-of-climbing/

"Saving the Desert: Push to restore Arches and Canyonlands National Parks", CBS This Morning. http://www.cbs.com/shows/cbs_this_morning/video/7YlcD9T8jWzNzZbycOZ_PbOO_p1zglt5/restoring-arches-and-canyonlands-national-parks/

## Languages

**Thai**, Level: intermediate

**R** (advanced), **Python** (intermediate), **Javascript** (intermediate), **SQL** (intermediate), **Cypher** (intermediate)