

STEPHEN E. FICK

Pivot Bio, 2910 7th St, Berkeley, CA

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EDUCATION:

Ph.D. in Ecology <i>Department of Plant Sciences, University of California, Davis</i>	2016
B.S. Biology, B.A. Archaeology - <i>Summa cum laude</i> <i>Wheaton College; Wheaton, Illinois</i>	2008

APPOINTMENTS:

Geospatial Data Scientist <i>Pivot Bio, 2910 7th St., Berkeley, CA</i>	May 2020 - present
Postdoctoral Researcher <i>US Geological Survey, Southwest Biological Science Center, Moab UT</i> <i>University of Colorado, Boulder and New Mexico State University</i>	2018 – May 2020
Research Fellow <i>Stockholm Environment Institute, Stockholm, Sweden</i>	2016 – 2018
Subject Matter Consultant Expert, Ecology <i>Plant Editors Scientific Editing Service</i>	2017-present

GRANTS, FELLOWSHIPS AND AWARDS

USGS Land Change Science Grant (\$25,500) <i>US Geological Survey, Washington DC</i>	2019
NRCS Soil Survey Collaborative Research Grant (\$154,936) <i>National Resource Conservation Service, Ft. Collins, CO</i>	2018
Henry A. Jastro Research Fellowship (\$2,250) <i>Ecology Awards Committee, University of California, Davis</i>	2014
Ben A. Madson Scholarship (\$500) <i>Dept. Plant Sciences, University California, Davis</i>	2013
Ecology Fellowship (\$60,000) <i>University of California, Davis</i>	2011
Plant Sciences Departmental Assistantship Award (\$30,000) <i>University of California, Davis</i>	2012-2013
Scholastic Honor Society <i>Wheaton College; Wheaton, Illinois</i>	2008

PEER-REVIEWED PUBLICATIONS

Baker, Z. and **S. Fick**. In Review. Loving it to Death: Land Use Conflict, Outdoor Recreation and the Contradictions of Wilderness in Southeast Utah, USA. *Environmental Sociology*

- Fick, S.E.**, M. Duniway, T. Nauman, C. Brungard. In Press. What determines the effectiveness of Pinyon-Juniper clearing treatments? Evidence from the remote sensing archive and counter-factual scenarios. *Forest Ecology and Management*
- Schulz, Terri T., et al. "Campfire Conversations at the 2020 Annual Meeting: Insights & Lessons Learned From "Cuss-and-Discuss" Rather Than "Chalk-and-Talk"." 2021. *Rangelands*.
- Shackelford, Nancy, et al. 2021. "Drivers of seedling establishment success in dryland restoration efforts." *Nature Ecology & Evolution* 5.9: 1283-1290.
- Rettig, E. M., **Fick, S. E.**, & Hijmans, R. J. 2020. The Female Empowerment Index (FEMI): spatial and temporal variation in women's empowerment in Nigeria. *Heliyon*, 6(5), e03829.
- Fick, S. E.**, T.W. Nauman, C.C. Brungard, and M.C. Duniway. 2021. "Evaluating Natural Experiments in Ecology: Using Synthetic Controls in Assessments of Remotely Sensed Land Treatments." *Ecological Applications* 31(3). doi: 10.1002/eap.2264.
- 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. Pfennigwerth, 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

Multivariate Statistics (<i>Graduate-level</i>)	2015
Quantitative Geography (<i>Graduate-level</i>)	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/re-storing-arches-and-canyonlands-national-parks/

LANGUAGES

Thai, Level: intermediate

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