Mariah L. Coley

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Education

University of California, Davis, Davis, CA
PhD Candidate, Geography — 2018 - Present
Advisor: Kate Scow
Research Interests: Dryland and smallholder agriculture, political ecology, soils

University of California, Davis, Davis, CA
MSc, International Agricultural Development — 2016 - 2018
Advisor: Kate Scow

Dartmouth College, Hanover, NH
BA, Studio Art and Classical Studies — 2007 - 2011

Teaching Experience

Teaching Assistant, ESM 195, UC Davis, Spring 2018, 2019, and 2020
Teaching Assistant, IAD 203, UC Davis, Winter 2018
Guest Lecturer, IAD 10, UC Davis, Winter 2020

Research Experience

Graduate Student Researcher — UC Davis Land, Air, and Water Resources
Advisors: Kate Scow, Nicole Tautges — 2020
Compiled interview data and conducted qualitative data analysis for research addressing perceptions, constraints, and barriers to pursuing healthy soils among California processing tomato growers.

Graduate Student Researcher — UC Davis Plant Sciences
Supervisors: Sonja Brodt, Amelie Gaudin — 2018-2019
Compiled and interpreted research results from large interdisciplinary, multi-institution team investigating the effects of whole orchard biomass recycling on orchard soil health, productivity, water use efficiency, and other outcomes. Developed project website for grower and academic audiences (orchardrecycling.ucdavis.edu): constructed website structure and navigation, produced all written content, designed page layouts, and managed creation and selection of graphic content

Research and Innovation Fellow — FtF Innovation Lab for Horticulture
Advisors: Kate Scow, Robert Hijmans — 2017-2018
Implemented a collaborative application of agro-ecological models with farmers in six rural communities in Eastern Uganda, as an extension of existing USAID-funded irrigation development research program. Configured biophysical process models to investigate present and likely future outcomes of farm management decisions and local climatic variations for small-scale vegetable producers. Conducted interviews with farmers to support ongoing and future efforts to implement collaborative application of models and to derive farmer-relevant outputs.

Graduate Student Researcher — Agricultural Sustainability Institute
Advisor: Thomas Tomich — 2016-2017
Documented sustainable agriculture and food systems programs, major contributions, and social and knowledge networks within the UC system. Supervised six undergraduate and graduate students in collecting and cleaning data for online catalogue. Developed static and interactive web pages to showcase project outputs

Research Assistant — Dartmouth Environmental Studies
Advisor: Anne Kapuscinski — 2013-2014
Conducted feeding-trial experiments in replacement of fish oil with microalgae in aquaculture feeds for Nile tilapia. Conducted independent research project to compare

nutrient profiles between a synthetic algal growth medium and aquaculture effluent. Trained and supervised five undergraduate research assistants in maintenance of extended fish feeding trials. Contributed to grant proposals and media communications.

Publications

Tomich, T., Lidder, P., Dijkman, J., **Coley, M.**, Webb, P., and Gill, M. (2019) Agrifood systems in international research for development: Ten theses regarding impact pathways, partnerships, program design, and priority-setting for rural prosperity. *Agricultural Systems* 172: 101-109. doi:10.1016/j.agsy.2018.12.004

Tomich, T., Lidder, P., **Coley, M.**, Gollin, D., Meinzen-Dick, R., Webb, P., and Carberry, P. (2019) Food and agricultural innovation pathways for prosperity. *Agricultural Systems* 172: 1-15. doi:10.1016/j.agsy.2018.01.002

Thomas, K., Liptzin, D., Tomich, T., **Coley, M.**, Dahlgren, R., Houlton, B., Scow, K., White, A. (2016). "Chapter 1: Introducing the California Nitrogen Assessment." In *The California Nitrogen Assessment: Challenges and Solutions for People, Agriculture, and the Environment*, edited by T. Tomich, S. Brodt, R. Dahlgren, and K. Scow. University of California Press, Oakland, CA, USA.

Champetier, A., Sumner, D., Tomich, T., Brodt, S., **Coley, M.**, Kreith, M., Rosen-Molina, J.T., Thomas, K. (2016). "Chapter 2: Underlying drivers of nitrogen flows in California." In *The California Nitrogen Assessment: Challenges and Solutions for People, Agriculture, and the Environment*, edited by T. Tomich, S. Brodt, R. Dahlgren, and K. Scow. University of California Press, Oakland, CA, USA.

Sarker, P.K., Kapuscinski, A.R., Lanois, A., Livesey, E., Bernhard, K., Coley, M. (2016). "Towards Sustainable Aquafeeds: Complete Substitution of Fish Oil with Marine Microalga Schizochytrium sp. Improves Growth and Fatty Acid Deposition in Juvenile Nile Tilapia (Oreochromis niloticus)." *PLoS ONE* 11(6): e0156684. doi: 10.1371/journal.pone.0156684

Honors and Awards

2018-2019: Geography Graduate Group Fellowship, *UC Davis*
2017: Research and Innovation in Food and Agriculture Fellowship, *USAID and UC Davis College of Agriculture and Environmental Sciences*
2017: Henry A. Jastro Research Award, *International Agricultural Development Graduate Group, UC Davis*
2011: Classes of 1960 and 2010 Purchase Award, *Dartmouth College Studio Art*
2010: Dartmouth College Fund Scholarship, *Dartmouth College*
2007-2011: Full Scholarship, *Dartmouth College*

Professional Experience

Editorial Consultant — UN Food and Agriculture Organization
2016-2018

In collaboration with members of the CGIAR Independent Science and Partnership Council, assisted with the identification and scoping of topics for commissioned articles for a special issue of the journal *Agricultural Systems*, "Agricultural research for rural prosperity: Rethinking the pathways." Published results of bibliometric data analysis in the issue's introductory article.

Editorial Assistant — Annual Reviews
2016 - Present

Conducted desk review of proposals submitted to *Annual Review of Environment and Resources* (ARER). Supported ARER editorial committee in commissioning and reviewing articles and assembling annual journal volume. Analyzed ARER publication data to identify topical gaps and gender and geography biases in authorship.

Research Staff Member — Agricultural Sustainability Institute
2014-2016

Managed concluding stages of the California Nitrogen Assessment project, an integrated assessment of nitrogen science and policy in California, including writing synthesis sections in two chapters, managing scientific peer- and public review processes, and preparing book manuscript for publication. Coordinated the dissemination of the California Nitrogen Assessment among local and state-level stakeholders, including farmer associations, industry groups, and California state agricultural and environmental policymakers. Developed web pages, fact sheets, brochures, and other communications products for the California Nitrogen Assessment and other projects and programs.

Languages and Technical Skills

Spoken Languages: Spanish (intermediate), Kiswahili (intermediate)
Programming and Design: R, QGIS, ESRI ArcMap, LaTeX, Adobe Photoshop, Illustrator, InDesign, Inkscape, GIMP
Web Development: HTML, CSS, Drupal (UC Davis SiteFarm)