
Samuel D. Chamberlain

Department of Environmental Science, Policy, and Management
Biometeorology Lab • University of California, Berkeley
Email: schamberlain@berkeley.edu
Phone: (650) 380-6275
Website: www.samdchamberlain.com

EDUCATION

- 2016 **Ph.D.** Ecology and Evolutionary Biology, Cornell University
Methane Fluxes in Human-Dominated Ecosystems: From Pastures to Cities,
Adviser: Jed Sparks, Committee: Peter Groffman, Todd Walter
- 2008 **B.A.** Biology, Reed College

PROFESSIONAL APPOINTMENTS

- 2016 **Postdoctoral Fellow**, Department of Environmental Science, Policy, and Management, University of California, Berkeley, *Adviser: Dennis Baldocchi*
- 2011-16 **Ph.D. Fellow/Teaching Assistant**, Department of Ecology and Evolutionary Biology, Cornell University
- 2011 **Research Assistant**, Department of Environmental Earth System Science, Stanford University
- 2009-10 **Post-Baccalaureate Fellow**, Earth Science Division, Lawrence Berkeley National Laboratory

PUBLICATIONS

- [1] **Chamberlain SD**, Anthony T, Silver WL, Eichelmann E, Hemes KS, Sturtevant C, Szutu DJ, Verfaillie JG, Baldocchi DD. 2018. Soil properties and sediment accretion modulate methane emissions from restored wetlands. *Global Change Biology*
- [2] Soper FM, **Chamberlain SD**, Crumsey JM, Gregor S, Derry LA, Sparks JP. Biological pumping of mineral nutrients in a temperate forested shale catchment. *JGR - Biogeosciences (in review)*
- [3] Eichelmann E, Hemes KS, Knox SH, Oikawa PY, **Chamberlain SD**, Sturtevant C, Verfaillie J, Baldocchi DD. 2018. The effect of land cover type and structure on evapotranspiration from agricultural and wetland sites in the Sacramento-San Joaquin River Delta, California. *Agricultural and Forest Meteorology*. 256-257: 179-195.
- [4] Gomez-Casanovas N, Bernacchi CJ, DeLucia N, Boughton EH, **Chamberlain SD**, Sparks JP, DeLucia EH. 2018. Grazing alters net ecosystem C fluxes and the global warming potential of a subtropical pasture. *Ecological Applications*. 28: 557-572.

- [5] Getz WM, Marshall CR, Carlson CJ, Giuggioli L, Ryan SJ, Boettiger C, **Chamberlain SD**, Larsen L, D'Odorico P, O'Sullivan D, Romanach SS. 2018. Making ecosystem models adequate. *Ecology Letters*. 21: 153-166.
- [6] **Chamberlain SD**, Verfaillie J, Eichelmann E, Hemes KS, and Baldocchi DD. 2017. Evaluation of density corrections to methane fluxes measured by open-path eddy covariance over contrasting landscapes. *Boundary Layer Meteorology*. 165: 197-210.
- [7] **Chamberlain SD**, Groffman PM, Boughton EH, Gomez-Casanovas N, DeLucia EH, Bernacchi CJ, and Sparks JP. 2017. The impact of water management practices on subtropical pasture methane emissions and ecosystem service payments. *Ecological Applications*. 27: 1199-1209.
- [8] **Chamberlain SD**, Ingraffea AR, and Sparks JP. 2016. Sourcing methane and carbon dioxide emissions from a small city: Influence of natural gas leakage and combustion. *Environmental Pollution*. 218: 102-110.
- [9] **Chamberlain SD**, Walter MT, Gomez-Casanovas N, Boughton EH, Bernacchi CJ, DeLucia EH, Groffman PM, Keel EW, and Sparks JP. 2016. Influence of transient flooding on methane fluxes from subtropical pastures. *JGR Biogeosciences*. 121: 965-977.
- [10] **Chamberlain SD**, Boughton EH, and Sparks JP. 2015. Underlying landscape emissions exceed cattle-emitted methane in subtropical lowland pastures. *Ecosystems*. 18: 933-945.
- [11] **Chamberlain SD**, Kaplan K, Modanu M, Sirianni KM, Annandale S, and Hewson I. 2014. Biogeography of planktonic and benthic cyanobacteria in coastal waters of the Big Island Hawai'i. *FEMS Microbiology Ecology*. 89: 80-88.
- [12] Chamberlain CP, Winnick M, Mix HT, **Chamberlain SD**, and Maher K. 2014. The role of Neogene grassland expansion and aridification on the isotopic composition of continental precipitation. *Global Biogeochemical Cycles*. 28: 992-1004.
- [13] Chamberlain CP, Waldbauer JR, Fox-Dobbs K, Newsome SD, Koch PL, Smith DR, Church ME, **Chamberlain SD**, Sorenson KJ, and Reisborough RJ. 2005. Pleistocene to recent dietary shifts in California Condors. *Proceedings of the National Academy of Sciences*. 46: 16707-16711.

RESEARCH GRANTS

2015	NSF Cross-scale Biogeochemistry and Climate Small Grant: \$4000 Department of Ecology & Evolutionary Biology Research Funds: \$1200
2014	Andrew M. Mellon Student Research Grant: \$980 Department of Ecology & Evolutionary Biology Research Funds: \$1000 Cornell Sigma Xi: \$600
2013	Department of Ecology & Evolutionary Biology Research Funds: \$1000
2012	NSF Cross-scale Biogeochemistry and Climate Small Grant: \$4000 Andrew M. Mellon Student Research Grant: \$1000

	Cornell Research Travel Grant: \$1303
	Cornell Sigma Xi: \$400
2011	NSF Cross-scale Biogeochemistry and Climate Small Grant: \$4000
2007	James F. & Marion L. Miller Foundation Undergraduate Research Grant: \$750

Total Research Funds Raised: **\$20,233**

FELLOWSHIPS AND AWARDS

2016	Cornell CALS Outstanding Graduate Teaching Assistant Award
2012-14	NSF Cross-scale Biogeochemistry and Climate IGERT Traineeship; \$60,000
2009-10	Post-Baccalaureate Fellowship, Earth Science Division, Lawrence Berkeley National Laboratory; \$36,000

TEACHING EXPERIENCE

2015	Lead Instructor/Lecturer , Advanced Ecology, Cornell University (15 lectures delivered)
2014	Guest Lecturer , Ecosystems Biology, Cornell University
2014-16	Teaching Assistant , Ecosystems Biology ('14), Advanced Ecology ('13), Ecology and the Environment ('11, '12, '16), Cornell University

INVITED PRESENTATIONS

2017	'Greenhouse gas exchange in human-modified ecosystems: Implications for land management decisions' – Department of Land, Air, and Water Resources. University of California, Davis. <i>Research Seminar</i>
	'Identifying scale-emergent drivers of divergent methane flux patterns and budgets across restored wetlands' – Environmental Systems Dynamics Laboratory. University of California, Berkeley. <i>Research Seminar</i>
	'Understanding the influence of scale-emergent biophysical drivers on methane fluxes from restored wetlands' – Workshop on Appropriate Complexity Modeling of the Impacts of Global Change on Ecosystems. University of California, Berkeley. <i>Research Seminar</i>
2015	'The global methane cycle: sources and sinks' – BioEE4780: Ecosystem Biology, Cornell University. <i>Guest Lecture</i>

CONTRIBUTED PRESENTATIONS

2017	'Identifying drivers of divergent methane fluxes from restored wetlands' – AGU Fall Meeting. New Orleans, LA. <i>Oral</i>
	'Identifying drivers of divergent methane flux patterns and budgets from restored wetlands' – FluxNet Workshop. Berkeley, CA. <i>Poster</i>

- 2016 'The impact of water management practices and associated methane emissions on subtropical pasture greenhouse gas budgets and ecosystem service payments' – AGU Fall Meeting. San Francisco, CA. *Oral*
- 2015 'Influence of water table fluctuations on subsurface methane dynamics and surface fluxes in seasonally flooded subtropical pastures' – AGU Fall Meeting. San Francisco, CA. *Poster*
- 'Influence of water table fluctuations on subsurface methane dynamics and surface fluxes in seasonally flooded subtropical pastures' – ESA Annual Meeting. Sacramento, CA. *Oral*
- 2014 'Underlying ecosystem methane emissions exceed cattle-derived methane from subtropical lowland pastures' – AGU Fall Meeting. San Francisco, CA. *Oral*
- 'Spatial and temporal variability in methane emissions from subtropical pastures' – ESA Annual Meeting. Sacramento, CA & BESS Student Symposium, Ithaca, NY. *Oral*

PROFESSIONAL ACTIVITIES

- 2013 **President**, Cornell Biogeochemistry, Environmental Science, and Sustainability Graduate Student Association
- 2012-15 **Grant Review Panelist**, Cornell Cross-scale Biogeochemistry and Climate Small Grant Program
- 2011-15 **Organizational Committee**, Cornell Biogeochemistry, Environmental Science, and Sustainability Seminar Series
- 2012 **Organizational Committee**, Department of Ecology and Evolutionary Biology Invited Speaker Series
- Reviewer*: Ecological Monographs, Ecosystems, Environmental Pollution, Geophysical Research Letters, JGR – Biogeosciences, Journal of Hydrology, Plant Biology, International Agrophysics, Boundary Layer Meteorology, Ecological Processes, Wetlands, Science of the Total Environment

AFFILIATIONS

American Geophysical Union, Ecological Society of America