

CURRICULUM VITAE

University of Idaho

NAME: Laurel M. Lynch

DATE: 01/21/2021

RANK OR TITLE: Assistant Professor

DEPARTMENT: Soil & Water Systems

OFFICE LOCATION AND CAMPUS ZIP:

Ag Science, Room 118
Department of Soil and Water Systems
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WEB:

DATE OF FIRST EMPLOYMENT AT UI: August 15, 2020

DATE OF TENURE: Untenured

DATE OF PRESENT RANK OR TITLE: August 15, 2020

EDUCATION BEYOND HIGH SCHOOL:

- 2012—2017 **PhD:** Ecology, Colorado State University, Fort Collins, CO
Advisors: Matthew Wallenstein, Francesca Cotrufo, Claudia Boot, Timothy Covino
Foci: ecosystem ecology, carbon dynamics, biogeochemical cycling, metabolomics, landscape connectivity, climate change
Dissertation: *Tracing carbon flows through Arctic and alpine watersheds*
- 2008—2012 **BA:** Biology with distinction, St. Olaf College, Northfield, MN
Advisors: John Schade, Stephanie Schmidt
Foci: biogeochemistry, plant-soil-microbe interactions
Thesis: *Seasonal patterns of soil extracellular enzyme activity and biogeochemical cycling in two restored prairies*

EXPERIENCE:

Teaching, Extension and Research Appointments:

- 2020— Assistant Professor, Department of Soil & Water Systems, University of Idaho, Moscow, ID
2020— Affiliate Faculty, Environmental Sciences Program, University of Idaho, Moscow, ID
2020— Affiliate Faculty, Water Resources, University of Idaho, Moscow, ID
2018—2020 Postdoctoral Research Fellow, Soil and Crop Sciences, Cornell University, Ithaca, NY
Fall 2017 Department of Energy Graduate Intern, Pacific Northwest National Laboratory, Richland, WA
2015—2017 Graduate Research Assistant, Natural Resource Ecology Laboratory, Colorado State University, Fort Collins, CO
2012—

Students Advised:

Undergraduate Students (research):

Graduate Students:

Current

Christine Whitehorse, PhD student, University of Idaho, major advisor, 2020—current

Ellen Incelli, MS student, University of Idaho, major advisor, 2020—current

Heather Neace, MS student, University of Idaho, major advisor, 2021—current

Bronte Solenn, PhD student, University of Idaho, committee member, 2020—current

Daniel Du, PhD student, University of Idaho, committee member, 2020—current

Materials Developed:

SWS 502 01: Terrestrial Ecosystem Ecology

SWS 502 02: Biogeochemical Cycling

Courses Developed:

ESS660: Biogeochemical cycling in ecosystems, Spring 2016 (3 cr.) (co-instructor, Colorado State University)

Non-credit Classes, Workshops, Seminars, Invited Lectures, etc.:

Invited lecture,

- 2019 Shao, P., C. Liang, **L. Lynch**, H. Xie, X. Bao. Forest restoration accelerates soil organic carbon accumulation: Evidence from microbial biomarkers. *Soil Biology and Biochemistry*, 131, 182-190.
- 2018 **Lynch, L.**, M. Machmuller, E. Paul, F. Cotrufo, M. Wallenstein. Tracking the fate of fresh carbon in the Arctic tundra: will shrub expansion induce soil priming? *Soil Biology and Biochemistry*, 120, 134-144.
- 2017 Ernakovich, J., **L. Lynch**, P. Brewer, F. Calderon, M. Wallenstein. Redox and temperature-sensitive changes in microbial communities and soil chemistry dictate greenhouse gas loss from thawed permafrost. *Biogeochemistry*, 134, 183-200.

Other: (reports, proceedings, papers, citations and references, performances)

Refereed/Adjudicated (currently scheduled or submitted): (provide citations)

Peer Reviewed/Evaluated (currently scheduled or submitted):

- 2021 Webster, T., R. Wilhelm, **L. Lynch**, T. Inagaki, S. Schweizer, M. Tfaily, R. Kukkadapu, C. Hoeschen, D. Buckley, J. Lehmann. Persistence of microbially-processed carbon in soils from contrasting ends of a precipitation gradient. *Soil Biology and Biochemistry*, In Review.
- 2021 Sutfin, N., E. Wohl, T. Feghel, **L. Lynch**. Logjams and channel morphology influence sediment storage, transformation of organic matter, and carbon storage within mountain stream corridors. *Water Resources Research*, In Review.

Presentations and Other Creative Activities: (i.e. slide sets, web pages, video productions, etc., provide date and location)

Professional Meeting Papers, Workshops, Showings, Recitals: (provide date and location)

First-author presentations / posters:

- 2019 **Lynch, L.M.**, M. Tfaily, M. Machmuller, F. Cotrufo, C. Liang, R. Chu, C. Boot, M. Wallenstein, J. Lehmann, 2019. Moving beyond stoichiometry: Simple substrates do not adequately capture complex pathways of root exudate decomposition. European Geophysical Union, Vienna, Austria.
- 2018 **Lynch, L.M.** (*Invited speaker*), 2018. *Carbon flows in Arctic and alpine watersheds*. Cornell University Biogeochemistry, Environmental Science, and Sustainability Seminar Series, Ithaca, NY.
- 2018 **Lynch, L.M.**, R. Chu, M. Tfaily, 2018. *Using ultrahigh resolution FT-ICR-MS to model complex pathways of root exudate decomposition*. Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory, Richland, WA.
- 2017 **Lynch, L.M.** (*Invited speaker*), C. Boot, T. Covino, M. Machmuller, C. Rithner, F. Cotrufo, M. Wallenstein, 2017. *From roots to rivers: Tracking the fate of dissolved organic matter through Arctic tundra soils*. Department of Energy Principal Investigators Meeting, Washington, DC.
- 2015 **Lynch, L.M.**, M. Machmuller, M.F. Cotrufo, M. Wallenstein, 2015. *Will Arctic shrub expansion result in a loss or gain of soil carbon?* Ecological Societies of America Meeting, Baltimore, MD.
- 2015 **Lynch, L.M.**, M. Machmuller, M.F. Cotrufo, E.A. Paul, M. Wallenstein, 2015. *Will Arctic shrub expansion result in a loss or gain of soil carbon?* Soil Ecology Society Meeting, Colorado Springs, CO.
- 2015 **Lynch, L., M.**, Machmuller, F. Cotrufo, E. Paul, M. Wallenstein. *Tracking the fate of Arctic carbon: Will Arctic shrub expansion result in a loss or gain of soil carbon?* Department of Energy, PI Meeting, Washington, DC.
- 2014 **Lynch, L., M.**, Machmuller, F. Cotrufo, E. Paul, M. Wallenstein. *Tracking the fate of Arctic carbon: Will Arctic shrub expansion result in a loss or gain of soil carbon?* Arctic LTER Meeting, Woods Hole, MA.
- 2011 **Lynch, L.M.**, D.E. Hernandez, J.D. Schade. *Extracellular enzyme activity and biogeochemical cycling in restored prairie soils*, Ecological Societies of America Meeting, Austin, TX.

- 2011 **Lynch, L.M.**, D.E. Hernandez, J.D. Schade. *Extracellular enzyme activity and biogeochemical cycling in restored prairie soils*, American Geophysical Union Meeting 2011, San Francisco, CA.

Collaborator & student presentations / posters (*indicates mentored student):

- 2020 LaCroix, R., **L.M. Lynch**, I. Shabtai, J. Lehmann. *Molecular diversity of soil organic matter*. Soil Science Society of America, Virtual Meeting.
- 2020 Sutfin, N., E. Wohl, T. Fegel, **L.M. Lynch**. *How might logjams reduce floodplain fine*

Honors and Awards:

- 2017 Visiting Graduate Student Scholar at the Pacific Northwest National Laboratory
- 2017 Awarded student travel grant to attend ESA conference

SERVICE:**Major Committee Assignments:****University, departmental, and college:****National:**

- 2020 NSF GRFP Ecology 3 Panel Review (25 applications)
- 2020 NSF DEB Ecosystems (ad hoc panel review)
- 2019 NSF DEB Ecosystems (ad hoc panel review)
- 2019 Reviewer for Intergovernmental Panel on Climate Change (IPCC, Chapter 5)

Professional and Scholarly Organizations (including memberships, committee assignments, editorial services, offices held and dates)

Editorial services:

- 2021 Review Editor on the Editorial Board of Soil Biogeochemistry & Nutrient Cycling (specialty section of Frontiers in Soil Science)

Memberships:

- 2011 Ecological Society of America
- 2011 American Geophysical Union
- 2016 Permafrost Young Researchers Network
- 2018 European Geophysical Union

Peer Reviewer for:

Nature Geosciences, Nature Communications, Global Change Biology, Soil Biology and Biochemistry, Biogeochemistry, Journal of Hydrology, AGU: Biogeosciences, Pedobiologia, Geoderma, Ecosystems, Royal Society of Chemistry: Analyst

Outreach Service:

- 2019 Co-organizer for earth keeping garden fair (biochar and soil microbes), Tompkins County, NY
- 2019 Co-organizer for public carbon-farming forum in Tompkins County, NY
- 2015 Co-organizer for front range student ecology symposium, Colorado State University

Interviews & Popular Press:

- NSF Science 360 (2015). Video interview for Science Nation. 'Arctic soils key to future climate' (www.nsf.gov/news/mmg/mmg_disp.jsp?med_id=185798)
- Heck, C. (2015). Video Interview for Live Science's Expert Voices: Op-Ed & Insights. 'Will warming surge as Arctic microbes feast on defrosting carbon?' (www.livescience.com/49431-impact-from-arctic-microbes-feasting-on-thawing-tundra.html)
- O'Brien, M. (2015). Video interview for PBS NewsHour. 'How soil and squirrels offer cues on Alaska climate change'. (www.pbs.org/newshour/show/alaska)

Community Service:

- 2018—2019 Elected Member of the Tompkins County Environmental Management Council, NY

Honors and Awards:

- 2019 Nominated for 'Achievement Award for Excellence in Mentoring' by Johannes Lehmann, Cornell

