

LINDEN M. SCHNEIDER

RESEARCH INTERESTS

My research motivation is three fold: (i) to answer basic biogeochemical questions related to carbon stabilization via mineral sorption in soils, (ii) to develop mathematical expression of reduction and release rates which can be used in modeling ecosystem functions to help predict the impacts of climate change on water resources and carbon storage, and (iii) to apply this basic knowledge to emerging organic contaminant transformation, fate, and transport to improve the quality of water resources for human utilization and enhanced ecosystem functions. The basic and applied aspects of my research will help me accomplish my goal of being an international expert in the development and application of biogeochemical knowledge in order to attenuate or avoid the adverse impacts of human activities on natural ecosystems.

EDUCATION

BA, Sonoma State University 2011
Botany, Minor Chemistry, Summa Cum Laude with Distinction

APPOINTMENTS

Graduate Student Instructor (Accepted) August 2015 –December 2015
University of California, Berkeley

Graduate Student Researcher August 2014 - Present
University of California, Berkeley

Senior Nursery Technician/Staff Research Associate II May 2013- July 2014
University of California, Berkeley, Department of Integrative Biology

Marine Ecology Research Assistant June 2011 – October 2011
Sonoma State University

Herbarium Curatorial Assistant September 2009- May 2011
North Coast Herbarium of California, Sonoma State University

CEQA Research Assistant June 2010- April 2011
Sonoma State Field Stations and Nature Preserves

130 Mulford Hall #3114, Berkeley, CA 94720
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lmschneider@berkeley.edu

LINDEN M. SCHNEIDER

Water Quality Research Assistant
Sonoma State University

June 2008- December 2010

PUBLICATIONS

Cohen, M.F., C.T. Hare, J. Kozlowski, R.S. McCormick, L. Chen, **L. Schneider**, M. Parish, Z. Knight, T. A. Nelson, B.Grewell. (2013). "Wastewater polishing by a channelized macrophyte-dominated wetland and anaerobic digestion of the harvested phytomass." *Journal of Environmental Science and Health, Part A Toxic/Hazardous Substance & Environmental Engineering* 48(3):319-330.

Schneider, L.M. (2011). "Effect of Harvesting on the Phosphate Removal Efficiency of Channelized Aquatic Scrubbers in a Temperate Climate." *Sonoma State University NoGAP/ McNairs Scholars Research Journal*.

PRESENTATIONS

Schneider, L., Borch, T., Rhoades, C., Pallud, C. "Impact of Temperature and Hydrological Residence Time on the Fate and Transport of Iron and Organic Carbon in Subalpine Wetlands." *American Geophysical Union, San Francisco, December 2015.*

Schneider, L., Borch, T., Rhoades, C., Pallud, C. "Impact of Temperature and Hydrological Residence Time on the Fate and Transport of Iron and Organic Carbon in Subalpine Wetlands." *Soil Science Society of America, Minneapolis, November 2015.*

Pallud, C., Schilling, K., **Schneider, L.**, Borch, T., Rhoades, C. "Temperature and redox effects on iron reduction kinetics and organic carbon transport in wetland soils," *Goldschmidt, Prague, Czech Republic, August 2015*

Pallud, C., Schilling, K., **Schneider, L.**, Borch, T., Rhoades, C. "Biogeochemical iron cycling in subalpine wetlands: Kinetics and impact on organic carbon transport," *American Geophysical Union Joint Assembly, Montreal, Canada, May 2015*

Wood, M.E., **Schneider, L.**, Nielsen, K.J. "Spatial and Temporal Variation in Calcium Carbonate Content and Growth of Articulated Coralline Algae in Northern California," *Western Society of Naturalists Meeting, Monterey, USA November 8, 2012*

Schneider, L.M. M.Wood, T. Nguyen, K. Nielsen. "Coralline algal turf communities in Northern California: Community structure and potential as a bioindicator of local

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seawater carbonate saturation state,” Beyond the Golden Gate Research Symposium, San Francisco, USA, November 1, 2011

HONORS/AWARDS/SCHOLARSHIPS

Soil Science Society of America Graduate Student Leadership Conference	2015
Esper S. Larsen Research Fund \$20,000 for stipend, tuition and fees for one semester and one summer	2015
Clay Minerals Society Student Research Grant \$1,200 for research expenses	2015
Summer Soils Institute at Colorado State University Acceptance and a scholarship to help cover tuition cost \$500	2015
Department of Environmental Science, Policy, and Management University of California, Berkeley Summer Research and Travel Funds \$750	2015
Bay Area Water Quality Fellowship \$10,000 stipend and tuition and fees for one semester	2015
Department of Environmental Science, Policy, and Management University of California, Berkeley 201C Starter Grant \$3,000 for research supplies	2014
National Science Foundation, Graduate Research Fellowship Program Honorable Mention	2013
Sonoma State University Graduation with Distinction, Summa Cum Laude	2011
American Business Women’s Association Wine County Scholarship \$1,500, One of four awarded campus wide	2010-2011
Vanette Bunyan Scholarship \$250, One awarded campus wide	2010-2011

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Mary Wood Scholarship \$1,110	2010-2011
Edgar and Beulah Dryden Fund Scholarship \$1,000	2010-2011
Dean's List Sonoma State University	2008-2011
Mc Nair's Scholar Program Research Stipend \$1,700	2010-2011
Rotary Youth Exchange Denmark	2003-2004

RESEARCH EXPERIENCE

Graduate Student Researcher University of California, Berkeley Supervisor- Céline Pallud, PhD Tasks- Conduct flow through reactor and slurry experiments on subalpine wetland soils to determine iron reductive dissolution rates and changes in dissolved organic matter concentrations in soil pore water. Wet chemistry techniques including creation of synthetic soil pore water and Ferrozine method to determine iron content. Use of analytical equipment such as total organic carbon analyzer, C/N analyzer and particle size distribution analyzer. Serve as a mentor to undergraduates in laboratory theory and practice. Apply for grants to fund myself and my research. Attend conferences and publish original research.	August 2014 - Present
Laboratory Research Assistant University of California, Berkeley Supervisor- Kathrin Shilling, PhD Tasks- Preparation of aerobic/anaerobic growth media, establishment and maintenance of anaerobic experimental and growth microbial cultures, preparation of stock solutions.	June 2013 – September 2013
Marine Ecology Research Assistant Sonoma State University Supervisor- Karina J. Nieslen, PhD	June 2011 – October 2011

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Tasks- Maintenance/installation of rocky intertidal ecology research plots, sample processing for species diversity from rocky intertidal and sandy beach habitats, calcium carbonate content analysis of coralline algae, DIC sampling, phytoplankton sampling, lead field teams.

CEQA Research Assistant June 2010- April 2011
Sonoma State Field Stations and Nature Preserves
Supervisor- Claudia Luke, PhD
Tasks- Identification and botanical descriptions of listed species and habitats for CEQA assessment, interpretation and assessment of GIS maps for potential habitat of state and federally listed species

Water Quality Research Assistant June 2008- December 2010
Sonoma State University
Supervisor- Michael F. Cohen, PhD
Tasks- Maintain experimental modules, collect composite water samples, analyze weekly samples for total P-phosphate content using Dionex Liquid Ion Chromatography, data analysis using JMP

RELEVANT WORK EXPERIENCE

Senior Nursery Technician/Staff Research Associate II May 2013- July 2014
UC Berkeley, Department of Integrative Biology
Supervisor- Derek Apodaca/Tim Herrlinger, PhD
Tasks- Greenhouse management, maintenance of research plants, pest management (IPM and traditional pesticide application), nutrient preparation and application, autoclave, general instructional support services, exam proctoring and grading, teaching laboratory set up and coordination, plant and algae collection, aquaria maintenance, research diving

Nursery Technician/Senior Nursery Technician October 2011- May 2013
UC Berkeley, College of Natural Resources
Supervisor- Barbara Rotz
Tasks- Greenhouse maintenance, production of research plants, pest management, field work, early entry worker, nutrient preparation and application, research infrastructure development, drip irrigation installation and maintenance, nutrient pump maintenance, production of plants for teaching, facilitation of teaching laboratories at the greenhouse, rearing and release of parasitic wasps for pest management, application of nematodes for IPM program

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Herbarium Curatorial Assistant September 2009- May 2011
North Coast Herbarium of California, Sonoma State University
Supervisor- Richard Whitkus, PhD
Tasks- Curation of herbarium collection, infestation management, preparation of educational displays

Arborist/Consulting Arborist August 2007- January 2008/ July 2014
Pacific Tree Care
Supervisor- Jacob Schneider
Tasks- Ground support for climbers, tree surveys, operation of wood chippers, stump grinders, chain saws, tree pruning, mycorrhizal and fish emulsions soil injections, air spade. Perpetration of arborist reports, extensive tree inventories, tree assessments, and reports for satisfaction of CDFW notification process for work in riparian areas.

PROFESSIONAL TRAINING

Summer Soils Institute, Colorado State University	2015
Introduction of Geographic Information Systems	2013
NAUI Rescue, Master and Nitrox Diver	2015
International Society of Arboriculture Certified Arborist	2014
US Sailing Basic Cruising	2006

VOLUNTEER EXPERIENCE

Sponsored Program of Undergraduate Research May 2015- August 2015
College of Natural Resources, University of California, Berkeley
Tasks- Serve as a mentor an undergraduate student to train them in laboratory technique related to iron cycling in subalpine wetlands. Techniques include flow through reactors maintenance and setup, C/N analysis, making synthetic soil pore water, the Ferrozine method for determination of ferrous and ferric iron concentrations, TOC analysis and particle size analysis.

Biology Scholars Program May 2015- August 2015
University of California, Berkeley

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Tasks- Serve as a mentor an undergraduate student to train them in laboratory technique related to iron cycling in subalpine wetlands. Techniques include flow through reactors maintenance and setup, C/N analysis, making synthetic soil pore water, the Ferrozine method for determination of ferrous and ferric iron concentrations, TOC analysis and particle size analysis.

Undergraduate Research Apprenticeship Program February 2015- May 2015

University of California, Berkeley

Tasks- Serve as a mentor an undergraduate student to train them in laboratory technique related to iron cycling in subalpine wetlands including making synthetic soil pore water and the Ferrozine method for determination of ferrous and ferric iron concentrations.

Naturalist September 2010- May 2011

Sonoma State University Field Stations and Nature Preserves

Tasks- Lead elementary school student on educational hikes at Fairfield Osborn Preserve, teach both floral and faunal knowledge

Sonoma State University Representative September 2010 –May 2011

California Native Plant Society, Milo Baker Chapter

Floristic Survey, Voucher Specimen Collection February 2010- December 2010

California Native Plant Society's Vine Hill Preserve

"A Vascular Flora of the Vine Hill Preserve: Sebastopol, Sonoma County, California"

PROFESSIONAL AFFILIATIONS

American Association for the Advancement of Science (AAAS)

Member Since 2011

Society of Wetland Scientists

Member Since 2015

Water Environment Federation

Member Since 2014

California Water Environment Association

Member Since 2014

American Geophysical Union

Member Since 2014

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Geochemical Society

Member Since 2014

International Society of Arboriculture

Member Since 2014

LANGUAGES

Conversational Spanish

Fluent Danish

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