

Amy Concilio

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CURRENT POSITION

Postdoctoral Scholar at University of Colorado, Boulder, with Timothy Seastedt (advisor)

EDUCATION

- 2012 **Ph.D. Environmental Studies**, University of California, Santa Cruz, with Michael E. Loik (advisor)
 “*Bromus tectorum* Invasion and Global Change: Likelihood of Spread and Feasibility of Control”
- 2005 **M.S. Ecology**, University of Toledo, with Jiquan Chen (advisor)
 “Interannual Variability in Soil Respiration and Response to Experimental Burning and Thinning in an Old Growth Mixed-Conifer Forest”
- 1999 **B.A. Chemistry**, Providence College, with Leslie Sherman (thesis advisor)
 “Phase Distribution of Arsenic in Soils and Sediments in and around the Mining Community of Zimapán, Hidalgo, Mexico”

AWARDS, GRANTS, AND HONORS

- 2012 First Place, Student Poster Contest at the California Native Plant Society Conservation Conference
- 2011 University of California Chancellor's Dissertation Year Fellowship (\$36,900 value)
- 2011 Outstanding Teaching Assistant Award, UC Santa Cruz (\$200 value)
- 2011 California Native Plant Society Educational Grant (\$700)
- 2011 Environmental Studies Departmental Award, UC Santa Cruz (\$1000)
- 2010 Graduate Research Assistantship, W. Cheng Lab, UC Santa Cruz (\$23,600 value)
- 2010 Best Poster Presentation, California Society for Ecological Restoration Annual Meeting
- 2009 Hammett Fund Award for Research on Water Management and Climate Change, UC Santa Cruz (\$1500)
- 2009 Mildred E. Mathias Graduate Student Research Grant, UC Natural Reserve System (\$2500)
- 2008 Valentine Eastern Sierra Reserve Graduate Student Grant, UC Reserve System (\$1128)
- 2007 EPA STAR Fellowship, Environmental Protection Agency, 3-year term (\$110,000 value)
- 2007 Graduate Grant, STEPS Institute for Innovation in Environmental Research, UC Santa Cruz (\$1500)
- 2006 Regent's Fellowship, Dean's Fellowship, Fee Fellowship, and Tuition Fellowship, UC Santa Cruz (\$55,000 value)
- 2005 Catherine Eberly Award for Women in Math and Science, University of Toledo
- 2003 Graduate Research Assistantships, Landscape Ecology & Ecosystem Science Laboratory, University of Toledo, awarded for 3 semesters and 3 summers (\$56,000 value)
- 1995 Dean Scholarship, Providence College, Providence, RI, 4-year term (\$40,000 value)

PUBLICATIONS

- 2015 Loik, M.E., A.B. Griffith, H. Alpert, **A.L. Concilio**, C.E. Wade, S.J. Martinson, (*in press*) Impact of intra- vs. inter-annual snow depth variation on water relations and photosynthesis for two Great Basin Desert shrubs. *Oecologia*.
- 2014 Tzankova, Z. and **A. Concilio** (*in press*) Social, logistical, and regulatory factors affecting feasibility of control of a widespread non-noxious invasive species at the edge of its range. *Biological Invasions*
- 2013 **Concilio, A.L.** (2013) Effectiveness and cost of downy brome (*Bromus tectorum*) control at high elevation. *Invasive Plant Science and Management*. 6(4): 502-511
- 2013 **Concilio, A.L.** and M.E. Loik (2013) Elevated nitrogen effects on *Bromus tectorum* dominance and native plant diversity in an arid, montane ecosystem. *Applied Vegetation Science*. 16(4):598-609
- 2013 **Concilio, A.L.** (2013) The spread of cheatgrass into the Eastern Sierra. *Fremontia*. 41(2): 10-13
- 2013 **Concilio, A.L.**, M.E. Loik, and J. Belnap (2013) Global change effects on *Bromus tectorum* L. (Poaceae) at its high-elevation range margin. *Global Change Biology*. 19 (1): 161-172

Curriculum Vitae

- 2010 Ma, S., **A. Concilio**, B. Oakley M. North, J. Chen (2010) Spatial variability in microclimate in a mixed-conifer forest before and after thinning and burning treatments. *Forest Ecology and Management*. 259: 904-915
- 2009 Ryu, SR, **A. Concilio**, J. Chen, M. North, and S. Ma (2009) Prescribed burning and mechanical thinning effects on belowground conditions and soil respiration in a mixed-conifer forest, California. *Forest Ecology and Management*. 257 (4): 1324-1332
- 2009 **Concilio, A.**, J. Chen, S. Ma and M. North (2009) Precipitation patterns drive inter-annual variation in summer soil respiration in a Mediterranean-climate, mixed conifer forest. *Climatic Change*. 92: 109-122
- 2007 Ongley, L., L. Sherman, A. Armienta, **A. Concilio**, and C. Ferguson Salinas (2007) Arsenic contamination in the soils of Zimapán, Mexico. *Environmental Pollution*. 145 (3): 793-799
- 2006 **Concilio, A.**, S. Ma, S.R. Ryu, J. Chen, and M. North (2006) Soil respiration response to burning and thinning from one to three years after experimental treatments. *Forest Ecology and Management*. 228 (1-3): 82-90
- 2005 **Concilio, A.**, S. Ma, Q. Li, J. LeMoine, J.Chen, M. North, R. Jensen, and D. Moorhead (2005) Soil respiration response to burning and thinning in mixed conifer and hardwood forests. *Canadian Journal of Forest Research*. 35 (7): 1581-1591

MANUSCRIPTS IN PROGRESS (* denotes undergraduate researcher)

- **Concilio, A.**, T. Vargas and W. Cheng (*accepted with revision*) Effect of an invasive annual grass on rhizosphere priming in invaded and uninvaded soils. *Submitted to: Plant and Soil*
- **Concilio, A.**, Prevéy, J. Omasta, P.*, Connor, J*, Nippert J, and Seastedt, T. (*in review*) Response of a mixed grass prairie to an extreme precipitation event: Introduced species, soil nitrogen and previous precipitation patterns influence responses. *Submitted to: Ecosphere*
- **Concilio, A.**, T. Seastedt, J. Nippert, and S. Ehrenfeucht * (*in preparation*) Directional shifts in plant community composition in response to global change in the Colorado Front Range. *Target journal: Global Change Biology*
- **Concilio, A.**, Seastedt, T. and Nippert, J. (*in preparation*) Competition between native and invasive grasses under past, present, and future global change scenarios. *Target journal: Journal of Ecology*
- **Concilio, A.**, E. Gasarch, and T. Seastedt (*in preparation*) Alpine plant community response to nutrient additions in the Colorado Rocky Mountains. *Target journal: Plant and Soil*
- Zhu, B., W. Cheng, C-Y Huang, **A. Concilio**, and M. Torn (*in preparation*) Rhizosphere priming in response to soil temperature and moisture.

BOOK REVIEWS

- 2009 Holl, K., **A. Concilio**, T. Cornelisse, G. Eshete, B. Ferguson, S. Langridge, J.L. Reid, D. Schweizer, J. Torres-Ortega, M. and Vasey (2009) *New Models for Ecosystem Restoration*- Edited by Richard J. Hobbs and Katherine N. Suding. *Restoration Ecology* 17 (4): 562
- 2007 Holl, K., M. Bonilla, R. Carle, S. Carvill, **A. Concilio**, A. Gabbe, K. Hulvey, E. Kolden, M.L.Krawack, D.Schweizer, and M. Vasey (2007) *Foundations of Restoration Ecology* - Edited by Donald A. Falk, Margaret A. Palmer, and Joy B. Zedler . *Restoration Ecology* 15 (3): 592–593

TEACHING AND MENTORING EXPERIENCE

Adjunct Faculty, Department of Biology, Berkeley City College

- Fall 2012: *Principles of Ecology*, lab
- Summer 2012: *Principles of Ecology*, lab and lecture (co-taught with Dr. Blair McLaughlin)

Adjunct Faculty, Graduate Program in Environmental Management, University of San Francisco

- Fall 2012: *Resource Management* (co-taught with Drs. Jae Pasari and Michael Vasey)

Lecturer, Department of Environmental Studies, UC Santa Cruz

- Summer 2012: *The Physical and Chemical Environment*

Teaching Assistant and Laboratory Instructor, Department of Environmental Studies, UC Santa Cruz

- Fall 2010: *Ecology and Society*
- Winter 2009: *Plant Physiological Ecology*
- Spring 2007: *Field Methods*

Curriculum Vitae

Teaching Assistant, Department of Earth Ecological, and Environmental Studies, University of Toledo

- Spring 2004: *Earth, Ecological, and Environmental Sciences Seminar Series*
- Fall 2003: *Biodiversity*

Mentor for Undergraduate Research, Department of Ecology and Evolutionary Biology, CU Boulder

- Fall 2014 (on-going): mentoring Summer Sugg on independent research on seed dispersal patterns and community assembly after an extreme event
- Summer-Fall 2014 (on-going): mentoring Peter Omasta on independent research on cheatgrass response to an extreme event; Peter presented this work at a conference (Guild of Rocky Mountain Ecologists and Evolutionary Biologists) and is co-authoring a manuscript
- Summer 2014: mentored Summer Sugg, Oren Rabanowitz, Michael Mann, and Johanna Protheroe on independent research through UROP on plant colonization on landslides after an extreme event

Mentor for Undergraduate Research, Department of Environmental Studies, UC Santa Cruz

- Spring 2011: mentored Brenna Blessing and James Hanson on independent research projects, both students presented at an undergraduate student research symposium and Brenna is co-authoring a manuscript with me
- Summer 2010: mentored Michael Kanning on an independent research project

Guest lectures for Undergraduate Courses

- *Invasive species, global change, and ecosystem transformation in the US West*. Upper-division undergraduate course on Field Methods in Environmental Science, Fort Lewis College, Durango, CO, Oct 9, 2014
- *Global change and plant communities in the Front Range*. Field trip leader for STEM in Action program with students from Foothills Community College, June 13, 2014
- *Role of introduced species as an ecosystem science issue*. Upper-division undergraduate Ecosystem Ecology course, University of Colorado, Boulder, April 28, 2014
- *The climate system*. Upper-division undergraduate Ecosystem Ecology course, University of Colorado, Boulder, January 24, 2014
- *Emerging topics in Invasion Biology*. Upper-division undergraduate Intervention Ecology course, University of Colorado, Boulder, Sept 17, 2013
- *Restoration of invaded habitats*. Upper-division undergraduate Restoration Ecology course, University of California, Santa Cruz, Aug 6, 2012
- *The carbon cycle*. Upper-division undergraduate Biogeochemistry course, University of California, Santa Cruz, Santa Cruz, CA. March 5, 2007

INVITED SEMINARS

- 2014 **Concilio, A.** Global change effects on the spread of cool-season exotic plants in the Colorado Front Range. Ecology and Evolutionary Biology Seminar Series, Kansas State University, April 24, 2014
- 2011 **Concilio, A.** and M. Loik. Effects of changing precipitation patterns on the spread of *Bromus tectorum* L. in the eastern Sierra Nevada and implications for management. Annual meeting of the California Invasive Plant Council. Tahoe City, CA, Oct 5-6, 2011
- 2005 **Concilio, A.** Women in Ecology: Successes and Obstacles. Brown Bag Seminar Series, Catherine E. Eberly Women Center, University of Toledo, Toledo, OH. Nov 3, 2005

SELECTED RESEARCH PRESENTATIONS

- 2014 Prevéy, J., **A. Concilio**, and T. Seastedt. Climate change and introduced plant species interactions in a semi-arid grassland in North America. Nov. 19, 2014. School of Plant Biology, University of Western Australia.
- 2014 **Concilio, A.**, T. Seastedt, and J. Nippert. Global change effects on exotic plant species in the Front Range, CO. Annual meeting of the Guild of Rocky Mountain Ecologists and Evolutionary Biologists. Sept 20, 2014
- 2014 **Concilio, A.**, T. Seastedt, and J. Nippert. Competitive interactions between exotic and native grasses under changing precipitation and increased nitrogen deposition in the Colorado Front Range. Ecological Society of America Annual Conference. Aug 13, 2014
- 2014 Zhou, B., W. Cheng, C-Y Huang, **A. Concilio**, and M. Torn. Rhizosphere priming in response to soil temperature and moisture. Ecological Society of America Annual Conference. Aug 11-15, 2014

Curriculum Vitae

- 2013 **Concilio, A.**, T. Seastedt, and J. Nippert. Global change effects on the spread of cool-season exotic plants in the Colorado Front Range. Ecological Society of America Annual Conference. August 9, 2013
- 2012 **Concilio, A.** and M.E. Loik. Elevated nitrogen effects on native plant diversity and *Bromus tectorum* L. dominance in the Eastern Sierra Nevada, CA. Ecological Society of America Annual Conference. Aug 10, 2012
- 2012 **Concilio, A.** and M.E. Loik. Effects of global change on ecosystem invasibility by *Bromus tectorum* L. in the eastern Sierra Nevada, CA. California Native Plant Society Conservation Conference. Jan 12, 2012
- 2012 **Concilio, A.** and M.E. Loik. Non-toxic control options for high elevation populations of *Bromus tectorum* L. in the eastern Sierra Nevada, CA. California Native Plant Society Conservation Conference. Jan 12, 2012
- 2011 **Concilio, A.** and M.E. Loik. Effects of global change on high elevation populations of *Bromus tectorum* in the eastern Sierra Nevada, CA. Ecological Society of America Annual Meeting. Aug 11, 2011. Austin, TX
- 2010 **Concilio, A.** and M.E. Loik. Control options for high elevation patches of cheatgrass (*Bromus tectorum* L.) in the Eastern Sierra Nevada, CA; California Society for Ecological Restoration (SERCAL) annual meeting, May 19-20, 2010. Mammoth Lakes, CA
- 2009 **Concilio, A.** and M.E. Loik. Management of high elevation populations of *Bromus tectorum* L. Restoring the West Conference. Oct 27-28, 2009. Logan, UT
- 2009 **Concilio, A.** and M.E. Loik. Effects of global change on the invasion of *Bromus tectorum* at high elevation in the eastern Sierra Nevada, CA. Ecological Society of America Annual Meeting. Aug 2-7, 2009. Albuquerque, NM
- 2009 **Concilio, A.** Factors affecting ecosystem invasibility by *Bromus tectorum* L. in the eastern Sierra. UCSC Plant Science Symposium. Jan 31, 2009. Santa Cruz, CA
- 2008 **Concilio, A.** and M.E. Loik. Climatic and edaphic drivers of ecosystem invasibility by *Bromus tectorum* L. in the eastern Sierra Nevada. CEREC Symposium. Nov 5-8, 2008. Bishop, CA.

ADDITIONAL PROFESSIONAL EXPERIENCE

- 2011 **Research Assistant**, Department of Environmental Studies, UC Santa Cruz. Rhizosphere priming effects on soil organic matter decomposition at the Konza Prairie LTER, 1/11- 9/11
- 2006 **Science Associate**, National Ecological Observatory Network, American Institute of Biological Sciences, Washington, DC, 12/05- 06/06
- 2005 **Research Assistant**, United States-China Carbon Consortium Project, University of Toledo. Effects of land management on carbon sequestration in rangeland sites across Inner Mongolia, China, 8/19/05- 10/31/05
- 2002 **Field Crew Leader**, Yellowstone Ecological Research Center, Silvergate, MT, 6/02-10/02

ACADEMIC SERVICE

- *Reviewer for*: American Journal of Botany, American Midland Naturalist, Biological Journal of the Linnean Society, Climatic Change, Ecosphere, Environmental Earth Sciences, Forest Ecology and Management, Global Change Biology, Invasive Plant Science and Management, Journal of Applied Ecology, Journal of Arid Land, Oecologia, Plant Ecology, Plant Ecology & Diversity, Weed Science
- Student Organizing Committee, California Native Plant Society 2012 Conservation Conference
- Steering Committee, UCSC Environmental Studies Graduate Students, 12/08- 9/09
- Graduate Committee, Graduate Student Representative for department, UCSC, 9/08 – 5/09
- Departmental Representative, Graduate Student Association, University of Toledo, 1/04 –5/04
- Graduate Student Association Representative on Health Care, University of Toledo, 1/04 –5/04
- Officer (VP, Secretary), Society for Environmental Education, University of Toledo, 9/03 - 5/04

COMMUNITY SERVICE AND OUTREACH ACTIVITIES

Service on non-profit boards of directors

- SkillShare Boulder, Boulder, CO, 1/14 -12/14
- Reskilling Expo, Santa Cruz, CA, 1/12 -6/13

Sustainability-focused events and projects

Curriculum Vitae

- Organized sustainability skills workshops at the HillFlea event, Boulder, CO, Aug 2013
- Organizational support for Reskilling Expos, Santa Cruz, CA, 2011-2013
- Organized skills-based workshops at Inner Sunset Sundays street event, San Francisco, CA, 10/12
- Collaborator on initiating and running the Place for Sustainable Living, Oakland, CA, 2011-2012
- Led workshop on worm composting, Kidzapalooza, Mammoth Lakes, CA, Earth Day 2010

Guest presentations for grammar school classes

- *Interview with an Expert*. Cullowhee Valley School, Cullowhee, NC. 11/17/14
- *Climate Change Ecology*. Georgiana Bruce Kirby Prep School, Santa Cruz, CA. 05/22/07, 05/15/08
- *Introduction to Ecology*. 5th grade, Beacher Road Elementary School, Woodbridge, CT. 11/18/05
- *Judge for student projects on ecological consequences of development*. Georgiana Bruce Kirby Preparatory School, Santa Cruz, CA. 12/15/11, 6/6/12

Educational Film

- Featured in the film The Teakettle Experiment: Fire and Forest Health, UC Davis, <http://teakettle.ucdavis/index/htm>, 2007

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- Ecological Society of America, member since 2004
- Union of Concerned Scientists, Science Network member since 2006
- Society for Conservation Biology, member since 2006
- California Native Plant Society, member since 2009
- California Invasive Plant Council, member since 2011

RELEVANT SKILLS

- **Spanish:** Fluent level of speaking, and advanced level of reading and writing
- **Computer:** extensive experience with R and SAS statistical software and all MS Office programs
- **Ecological field sampling:** plant identification, ecophysiological monitoring, soil and ecosystem carbon flux, soil nutrient sampling, isotopic analysis of plant and soil tissues, microclimate monitoring
- **Backcountry:** extensive experience backpacking, backcountry skiing, and bike-touring