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UWBB Bothell, 98011

## RESEARCH INTERESTS

Biodiversity and ecosystem function; Community assembly; Disturbance; Global environmental change; Ecological modeling; Invasion biology; Patterns and drivers of diversity at population and community level; Plant traits; Succession.

## EDUCATION

## 2011 Ph.D., Yale University, Department of Ecology and Evolutionary Biology.

## Advisor: Melinda Smith

2007 M.S., Yale University, Department of Ecology and Evolutionary Biology

2006 Organization for Tropical Studies- Duke University, Tropical Ecology in Costa Rica

2005 B.S., University of Maryland at College Park, Environmental Science and Policy (ENSP),

Conservation Biology, graduated Cum laude with High Honors

2004 School for International Training- New Zealand, Biodiversity and Conservation biology

## POSITIONS

Present - University of Washington-Bothell, Division of Biology, Assistant Professor

2014 (Sept)

2014 (Aug) – University of Washington, Department of Biology, National Science Foundation

2012(April) Postdoctoral Fellow. Advisors: Janneke Hille Ris Lambers and Peter Guttrop

2012(April) – University of Florida, Department of Biology, Postdoctoral Researcher.

2011 (Sept) Advisor: Jeremy Lichstein

2005 - 2003 University of Maryland, Department of Biology, HHMI Undergraduate Researcher.

Advisors: Michele Dudash and Courtney Murren.

2004 Harvard University, Harvard Forest, National Science Foundation-Research Experience

for Undergraduates (REU). Advisors: Kathleen Donohue and Kristina Stinson.

2004 Department of Justice, Environment and Natural Resources Division, legal intern.

2002 National Park Service (Muir Woods), Student Conservation Association intern.

**GRANTS/AWARDS**

2014 - 2012 National Science Foundation Postdoctoral Fellowship, Intersection of Math and Biology

2010 National Science Foundation Dissertation Improvement Grant (Co-PI Melinda Smith)

2010 Yale University Enders Fellowship

2008 Nature Conservancy Weaver Grant

2006 Yale Institute for Biospheric Studies- Field Ecology Grant

2006 Lewis and Clark Research Grant

2005 - 2001 University of Maryland Presidential Scholarship

2005 - 2001 University of Maryland Dean’s List

2005 Howard Hughes Undergraduate Research Travel grant

2004 National Science Foundation REU Fellowship, Harvard Forest

2004 University of Maryland Environmental Science and Policy scholarship award

2004 Howard Hughes Medical Institute Undergraduate Research Fellowship

2003 University of Maryland, University Honors Citation

**PUBLICATIONS**

**Chang, C.C.** and M.D Smith. 2014. Resource availability modulates above and belowground competitive interactions between genotypes of a dominant C4 grass. Functional Ecology. 28: 1041-1051

**Chang, C.C.** and M.D. Smith. 2014. Direct and indirect relationships between genetic diversity of a dominant grass, community diversity and aboveground productivity in tallgrass prairie. Journal of Vegetation Science. 25: 470-480

Avolio, M.L., **C.C. Chang**, J.J. Weis, M.D. Smith. 2014. The effects of genotype richness and genomic dissimilarity of *Andropogon gerardii* on invasion resistance and productivity. Plant Ecology and Diversity. 10.1080/17550874.2013.866990

**Chang, C.C.** and M.D. Smith. 2013. Genotypic diversity of a dominant C4 grass across a long-term fire frequency gradient. Journal of Plant Ecology. 6:448-458

**Chang, C.C.** and M.D. Smith. 2012. Invasion of an intact plant community: the role of population vs. community level diversity. Oecologia 168:1091-1102

LaPierre, K. J., S. Yuan, **C.C. Chang**, M.L., Avolio, L.M. Hallett, T. Schreck, M.D. Smith. 2011. Explaining temporal variation in aboveground productivity in a mesic grassland: The role of climate and flowering. Journal of Ecology. 99: 1250–1262

Avolio, M.L., **C.C. Chang**, M.D. Smith. 2011. Assessing the fine-scale genetic diversity of *Andropogon gerardii* in intact tallgrass prairie. American Midland Naturalist. 165(2):211-224

Murren, C.J., **C.C. Chang**, and **M.R. Dudash**. 2009. Patterns of selection of two North American native and non-native populations of Monkeyflower (Phyrmaceae). **New Phytologist** 183:691-701

**MANUSCRIPTS IN PREPARATION (available upon request)**

**Chang, C.C.** and J. Hille Ris Lambers. Trait and phylogenetic patterns reveal non-random community assembly mechanisms on Mount St. Helens. Submitted to Journal of Ecology

Koerner, S.E., M.L. Avolio, **C.C. Chang**, D.L. Hoover, M.D. Smith. Inter- not intra-annual precipitation variability determines invasion of a mesic grassland. Submitted to Nature Climate Change

Weis, J.J., M.L. Avolio, **C.C. Chang**, T.C. Hanley. Relative influences of interspecific and intraspecific competitor diversity on community productivity: an integrative theoretical approach. In preparation for Ecology and Evolution

**CONFERENCE PRESENTATIONS / INVITED SPEAKER**

2013 Swiss Federal Research Institute, Alpine and Arctic Plants and Climate Change, Bergun, Switzerland, Oral presentation: Trait and phylogenetic patterns reveal non-random, niche-based community assembly on Mount St. Helens.

2012 Washington State University-Vancouver, Invited guest lecture: Community assembly and functional traits: lessons from Mount St. Helens.

2012 Ecological Society of America, Portland, OR, Oral presentation: Plant community assembly from a trait-based perspective: modeling stochastic and deterministic processes on Mount St. Helens.

2011 Ecological Society of America, Austin, TX, Oral presentation: Resource availability modulates above and belowground competitive interactions between genotypes of a dominant C4 grass.

2011 INTERFACE/CLIMANNI workshop, Iceland, Poster presentation: Relative effect of genetic, trait, and community diversity on productivity across a fire gradient in the tallgrass prairie.

2010 Ecological Society of America, Pittsburgh, PA, Oral presentation: Role of fire on different levels of diversity in tallgrass prairie.

2009 Ecological Society of America, Alburquerque, NM, Oral presentation: Diversity has varying impacts on invasion resistance and productivity in native tallgrass prairie.

2008 Ecological Society of America, Milwaukee, WI, Poster presentation: The role of diversity at the community and population level on productivity and invasion of the tallgrass prairie ecosystem.

2008 Kansas State University, Department of Biology seminar series, Invited talk: The role of diversity at the community and population level on productivity and invasion of the tallgrass prairie ecosystem.

2005 Society for the Study of Evolution, Fairbanks, Alaska, Poster presentation: Patterns of selection of native and non-native populations of *Mimulus guttatus* grown in drought and non-drought conditions.

**TEACHING EXPERIENCE**

2014 University of Washington, Instructor, Plant Ecology (~30 students)

2013 University of Washington, Co-instructor, Introduction to Biology (~1100 students)

2011-2009 Yale University, Teaching fellow, Diversity of Life (lab and writing intensive course)

2009 Yale University, Teaching fellow, Ecosystem Analysis (field course)

2007 Yale University, Teaching fellow, General Ecology (writing intensive course)

2006 Yale University, Teaching fellow, Introduction to Behavior, Ecology, and Evolution

2005 Exploration Summer Senior Program at Yale University, Biology instructor and RA

2004-2002 University of Maryland Gemstone Program, Section leader

**MENTORING EXPERIENCE**

2012 University of Washington, Mentored Teresa Zhang, Caitlin Forrester, Patrick Owen (undergraduate students)

2011 Yale University, Mentored Alex Fong (high school student), Alyssa Cheung (undergraduate student), and Judy Ward (post-bac)

**SERVICE ACTIVITIES**

2013 Girls on Ice (University of Alaska) volunteer

2012 Field Trip volunteer to Mount St. Helens for Mercer Middle School

2011-2010 Ecological Society for America Public Affairs Committee Student Liaison

2010 New Haven Science Fair judge

2010 New Haven Science Fair, Family Nights volunteer

2009-2005 High school science class mentor w/ Ms. Christin Arnini, Co-Op High School

2008-2007 Yale University McDougal Center Student Life graduate fellow

2008-2005 Sierra Club Inner City Outings (New Haven chapter)

**JOURNAL REVIEWS**

*Ecology, Journal of Ecology, Ecosphere, Ecological Monographs, Oikos, Oecologia, Biological Invasions*, USGS, Journal of Coastal Research

**REFERENCES**

Melinda Smith (Ph.D Dissertation advisor)

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Jeremy Lichstein (Postdoctoral advisor)

Assistant Professor

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Scott Freeman (Co-instructor)

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