

Stephen Johnson

Curriculum Vitae

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CURRENT

Graduate Research Assistant

Land Resources and Environmental Sciences, Montana State University

EDUCATION

Montana State University (MSU), Bozeman, MT

Expected: May 2015

Master of Science in Land Resources & Environmental Sciences

Washington State University (WSU), Pullman, WA

May 2011

Bachelor of Science in Biology – Ecology and Evolutionary Studies

Comparative Ethnic Studies Minor

President's Honor Roll 3.69 GPA

Saint John Bosco High School, Bellflower, CA

2005

High School Diploma

RESEARCH EXPERIENCE

Graduate Research Assistant, Land Resources & Environmental Sciences

May 2013- Present

Montana State University, Bozeman, MT

Advised by: Perry Miller and Fabian Menalled

Studying the ecology, weed-crop dynamics, and agronomics of organic and conventional dryland agriculture systems in the Northern Great Plains. Research includes:

- Approaches to terminating cover crops organically by tillage or with minimum tillage through integration of sheep, and by conventional chemical methods.
- Crop growth and weed interactions as mediated through plant soil feedbacks in organic and conventional systems.
- Initial weeds and relative impact on yields in organic and conventional systems.
- Assessing the abundance, diversity, and spatial patterns of weeds in organic and conventional spring wheat systems and its relationship to beneficial insects and pathogens.

Research Intern, WSU Crop and Soil Sciences, Pullman, WA

May 2011-May 2013

Proficient in year-round duties of a wheat breeding program including field, greenhouse, and laboratory projects. Goals of this program are to bring genetic resistance to various diseases and to increase productivity of wheat in the Pacific Northwest.

- Knowledgeable in scientific databases, including data organization in Excel, compiling agronomic traits, disease ratings, and maps.
- Experienced in scientific research, having responsibilities that include planting, data collection and organization, harvesting, lab analysis, and greenhouse research.
- Supervisory experience over field crew, including working with graduate students, and experienced in running all field aspects of this project throughout Eastern Washington and surrounding areas.
- Familiar with wheat breeding, crossing methods, and advancing generations for future release.

Professional Worker I, Crop and Soil Sciences, WSU, Pullman, WA **November 2012-May 2013**

Writer and co-author for research paper on the use of *Brassica juncea* as a biofumigant to control *Pythium spp.* I am responsible for compiling all research and data analysis for this project in order to publish our results.

Technical Assistant II, Crop and Soil Sciences, WSU, Pullman, WA **January 2008-March 2011**

Independently organize and run various scientific experiments for crop and soils research, taking detailed data and performing analysis.

- Lab experience with soil analysis (nitrate and ammonium), pathogen analysis (*Fusarium* and *Pythium spp.*), sterile techniques, agar media, and other general lab equipment and techniques.
- Assisting in all aspects of experimentation including design, set-up, data collection, analysis, and reporting.
- Projects include use of *Brassica* species as biofumigant controls on fungal pathogens for various crops, nitrogen assimilation by *Rhizobium* in various legumes, and soil gas exchange and the effects of climate change.

FIELD EXPERIENCE

Intern, Washington Conservation Corps (WCC), Renton, WA **September 2006-September 2007**

Experienced with restoration of native vegetation and control of invasive species for wetland and riparian mitigation, and salmon restoration. Knowledgeable in Northwest ecology and plant identification.

Project sites required routine maintenance, weed control, monitoring, watering, setting plant protectors, potting native plants, and mulching native nurseries

- Project sites involved an array of restoration techniques including installation of large woody debris for fish habitat, wetland development, use of black fabric to control invasive grasses (e.g. *Phalaris arundinacea*), planting of willow and cottonwood stakes, and manual and chemical weed control.
- Developed and implemented a system for maintenance/care of tools for all three King County WCC Crews and gained experience in hand tool as well as small engine use, repair, and maintenance.
- Assisted Crew Supervisor in managing crew and communicating with government agencies.

Intern, Desert Restoration Corps, SCA, Ridgecrest, CA **September 2005 – May 2006**

Worked in all seasons of the desert environment coordinating with the Bureau of Land Management to restore desert ecosystems from illegal off-road vehicle use and mismanagement.

- Planted native plants, collected native seeds, and installed fencing around areas of conservation.
- Documented restoration sites with GPS and photography.
- Attended and presented in BLM, community, and lobbyist meetings mitigating effective solutions for desert conservation emphasizing diverse political, economical, and environmental concerns.
- Planned and coordinated a public volunteer event involving erosion control and restoration with local community.

LEADERSHIP AND COMMUNICATION EXPERIENCE

Crew Leader, Student Conservation Association (SCA), NH **May-September 2008, 2009**

Co-led and supervised crews of 6-8 students in trail work and manual labor in outdoor environments emphasizing safety, quality work, learning experiences, effective communication, project designations, and a fun and cooperative working environment.

- Planned, budgeted, and cooperated with government agencies to line up project details which included submitting final project reports, calling and sending notices to participants and family members, and operating within an appropriated budget.

OTHER EMPLOYMENT

Wheat Genetics Technical Assistant, USDA, Pullman, WA Summer 2006, January 2008-April 2011

Experienced in year-round duties of wheat production for scientific research including planting and harvesting, machine maintenance and repair, weed control, data input, greenhouse production, and seed testing and preparation.

Crew Member, Saguaro National Park, SCA, AZ September-October 2007

Worked on a professional trail crew emphasizing timber trail structures involving finer carpentry skills. Helped coordinate with Park Service employees and assisted in budget allocation and spending.

Intern, Pacific Crest Trail Corps, SCA, CA, WA May – August 2005

Experience in trail work, tool use and maintenance, as well as crew dynamics.

Assistant, Advanced Cabinets Inc., Santa Fe Springs, CA 2001-2005

Skilled in carpentry, wood-work, finishing, and installation.

VOLUNTEER

Palouse Clearwater Environmental Institute, Moscow, ID February 2012-December 2012

Work on the conservation, protection, and restoration of various projects centered around the watersheds of the Palouse region and Clearwater River as a habitat technician intern.

Local Roots Organic Farm, Carnation, WA Summer 2007

Willing Workers on Organic Farms, WA May-July 2006

Saguaro N.P. High School Crew, SCA, AZ Summer 2004

RESEARCH INTERESTS

Restoration Ecology, Conservation Biology, Agroecology, Invasive Plant Ecology, Natural Systems Agriculture, Environmental/Indigenous Issues, Social-Ecological Systems

I am interested in both agriculture and native landscapes, particularly in taking ecological approaches to cropping and breeding systems. This includes diversifying rural ecosystems on the landscape level, restoring watersheds, riparian areas, grasslands, and other communities especially around heavily farmed environments. I am also interested in broader research in ecosystem, community, and non-native plant ecology and looking at natural systems to model our agriculture systems. Further interests span into environmental law and indigenous issues and the intersections of both in political contexts.

HIGHLIGHTS OF QUALIFICATIONS

- Scientific Research
- Lab Skills
- Restoration of Riparian and Desert Ecosystems
- Teamwork
- Field Ecology
- Compiling and Writing Reports
- Greenhouse Experience
- Crew Supervision
- Plant Identification and Systematics
- Data Analysis (SAS & R)
- Organizational Skills
- Microsoft Office Applications

Trainings:

- Wilderness First Responder
- Greenhouse Worker Protection Standard
- Wildland Fire Red Card
- Licensed Pesticide Public Operator