

# Miranda Redmond

Ramaley N122, University of Colorado, CB 334, Boulder, CO 80309

415.300.6901

mirandaredmond@gmail.com

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## Education

**University of Colorado, Boulder** Dept. Ecology and Evolutionary Biology Boulder, CO  
Doctoral Student (Advisor: Dr. Nichole Barger)

- Research topic: Vulnerability of Pinyon Pine (*Pinus edulis*) to Changing Climate along the Colorado Plateau

**University of California, Berkeley** College of Natural Resources Berkeley, CA  
B.S., Environmental Science (Ecology focus), Minor in Forestry May 2009

- GPA 3.88, High Distinction (magna cum laude) in the College of Natural Resources
- Thesis: "Recruitment and Dominance of *Quercus rubra* and *Quercus alba* in a previous Oak-Chestnut Forest from the 1980s to 2008"

## Peer Reviewed Publications

- **Redmond, M.D.**, Hartson, R.B., Hoverman, J.T., De Jesus-Villanueva, C.N., and P.T.J Johnson. *In press*. Experimental exposure of *Helisoma trivolvis* and *Biomphalaria glabrata* (Gastropoda) to *Ribeiroia ondatrae* (Trematoda). *Journal of Parasitology*.
- Johnson, P.T.J., Preston, D.P., Hoverman J.T., Henderson, J.S., Paull, S.H., and **M.D. Redmond**. *In press*. Species diversity reduces parasite transmission through cross-generational effects on host abundance. *Ecology*.
- **Redmond, M.D.**, Wilbur, B., and H.M Wilbur. *In prep*. Recruitment and Dominance of *Quercus rubra* and *Quercus alba* in a previous Oak-Chestnut Forest from the 1980s to 2008. *American Midland Naturalist*.

## Presentations

- Ecological Society of America, 2010. Poster presentation. "Recruitment and Dominance of *Quercus rubra* and *Quercus alba* in a previous Oak-Chestnut Forest from the 1980s to 2008"
- Ecolunch – University of California, Berkeley. 2009. Oral Presentation. "Recruitment and Dominance of *Quercus rubra* and *Quercus alba* in a previous Oak-Chestnut Forest from the 1980s to 2008"

## Grants and Fellowships

- NSF Bioscience Research Experience for Undergraduates Travel Grant, 2010. \$1,000
- NSF Research Experience for Undergraduates, 2008 \$4,000
- UC Berkeley Sponsored Projects for Undergraduate Research, 2007 \$500

## Outreach

- Undergraduate Research and Opportunities Program (UROP) at CU Boulder, Mentor 2011
- Lab tour: taught 25 local middle school students about the research in our lab (50 min.) 2011
- High School Mentorship Program at CU Boulder, Mentor 2010-11
- Fundacion Runa in Ecuador and the US, sustainability investigator and representative 2010-11
- Bioscience Undergraduate Research Skill and Training (BURST) at CU Boulder, Mentor 2010
- Summer Multicultural Access to Research Training (SMART) at CU Boulder, Mentor 2010
- Research Experience for Undergraduates (REU) at the MRS, CU Boulder, Mentor 2010
- Pachamama Alliance, 4 mo. teaching English and working on sustainability projects 2008  
in the Ecuadorian Amazon

## Relevant Research Experience

**University of Colorado, Boulder** – Amphibian Disease Ecology Lab (Dr. Pieter Johnson)  
*Lab Manager* Boulder, CO Jan 2010 -Present

- Submit reports to landowners/funders, renew old permits/obtain new permits to field sites.
- Maintain a functional lab: order equipment; organize staff; assist in hiring of new employees.
- Improve lab productivity: research new methods and products, assist in designing Microsoft Access database and creating queries to extract data, and edit manuscript drafts.
- Field and lab work included sampling for amphibians and snails, water measurements using a YSI probe, acid washing nutrient bottles, dissecting snails, identifying parasite cercariae, caring for snails and amphibians.

**University of California, Merced** – Alpine Treeline Warming Experiment (Dr. Lara Kueppers)  
*Research Assistant* CU Mountain Research Station, CO Dec 2009 - April 2010

- Monitored study sites on Niwot Ridge throughout the winter in adverse weather conditions. Work included skiing to sites, snow depth surveys, checking data loggers, weather stations, and heaters.

**University of California, Berkeley** – Alpine Treeline Warming Experiment (Dr. Lara Kueppers)  
*Crew Lead* CU Mountain Research Station, CO May 2009 - April 2010

- As crew leader I planned daily tasks, developed protocols, and managed up to 8 people in the field.
- Field work included monitoring seedling survival, transplanting, collecting and sowing seed.
- Designed Excel datasheet for large and complex data, allowing easy analysis using SAS statistics software.

**University of California, Berkeley** – Community Ecology Lab (Dr. Wayne Sousa)  
*Research Assistant* Berkeley, CA Sept. 2008 – May 2009

- Assisted in a wide range of ecology field work in California and Panama.
- Performed DNA extractions, prepared and analyzed bacteria stain slides, and did data entry.

**National Science Foundation** – Research Experience for Undergraduates  
*Independent Research Project* Mountain Lake Biological Station, VA 2008 (summer)

- Conducted my own independent research project on forest ecology with Dr. Henry Wilbur of UVA.
- Research included literature reviews, field work, and data analyzing using JMP and SAS.
- Wrote a scientific paper on my findings, and gave presentations in a variety of academic settings.

**University of California, Berkeley** – Range Shifts in High Elevation Pine Species (Dr. John Harte)  
*Research Assistant &, Researcher* Berkeley, CA and Mammoth, CA Feb. 2007 – June 2007

- Conducted literature reviews, collected, counted, and identified pine seeds for a graduate student.
- Assisted in field work in Mammoth, CA doing fixed width strip sampling of pine seedlings, monitoring pine seedling survival, mapping forests, and measuring canopy cover.
- Performed a common garden study to see if there were phenotypic variations among a variety of Jeffrey Pine seeds gathered throughout California. Tasks included literature reviews, and field work (obtaining and sowing seeds, monitoring seedlings, and creating rodent proof cages).

## Skills

- Familiarity with SAS, JMP, COFECHA, Microsoft Excel and Access, and conducting literature reviews
- Ability to write publishable scientific papers and give presentations on research findings.
- Field work: snow surveys, checking data loggers and weather stations, soil moisture and soil temperature data collection, vegetation sampling, forest mapping, tree coring, chain saw, seedling monitoring, designing and constructing seed traps, GPS, climbing trees, sowing seeds, seining, dipnetting, YSI measurements.
- Lab work: performing DNA extractions, preparing and analyzing bacteria stain slides, obtaining soil pH and soil moisture, maintaining the cycle of the parasite *Ribozira ondatrae*.