

PAUL C. SELMANTS

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EDUCATION

2007 Ph.D. (with distinction), Forest Science, Northern Arizona University.

2000 M.S., Botany, University of Wyoming.

1996 B.S., Botany, Miami University of Ohio.

PROFESSIONAL EXPERIENCE

Postdoctoral Scholar, Environmental Studies Department, University of California at Santa Cruz.
October, 2008 – present. Postdoc advisor: Erika Zavaleta.

Postdoctoral Research Associate, Cottonwood Ecology Group, Northern Arizona University.
May, 2007 – October, 2008. Postdoc advisors: Tom Whitham and Steve Hart.

EPA-STAR Graduate Fellow, School of Forestry, Northern Arizona University, 2003 – 2006.

Graduate Research Assistant, School of Forestry, Northern Arizona University, 2000 - 2003.

Graduate Research Assistant, Department of Botany, University of Wyoming, 1998 - 2000.

Teaching Assistant, Department of Botany, University of Wyoming, 1997 – 1998.

Director of Forfar Field Station, Andros Island, Bahamas, 1996 - 1997.

PUBLICATIONS

Selmants, P.C. and S.C. Hart (2008) Substrate age and tree islands influence carbon and nitrogen dynamics across a semiarid retrogressive chronosequence. *Global Biogeochemical Cycles*, 22, GB1021, doi:10.1029/2007GB003062.

Selmants, P.C., S.C. Hart, S.I. Boyle, C.A. Gehring, and B.A. Hungate (2008) Restoration of a ponderosa pine forest increases soil CO₂ efflux more than either water or nitrogen additions. *Journal of Applied Ecology*, 45, 913-920.

Hungate, B.A., S.C. Hart, **P.C. Selmants**, S.I. Boyle, and C.A. Gehring (2007) Soil responses to management, increased precipitation, and added nitrogen in ponderosa pine forests. *Ecological Applications*, 17, 1352-1365.

- Hart, S.C., **P.C. Selmants**, S.I. Boyle, and S.T. Overby (2006) Carbon and nitrogen cycling in southwestern ponderosa pine forests. *Forest Science*, 52, 683-693.
- Hart, S.C., C.A. Gehring, **P.C. Selmants**, and R.J. Deckert (2006) Carbon and nitrogen elemental and isotopic patterns in macrofungal sporocarps and trees in semi-arid forests of the southwestern USA. *Functional Ecology*, 20, 42-51.
- Selmants, P.C.**, S.C. Hart, S.I. Boyle, and J.M. Stark (2005) Red alder (*Alnus rubra*) alters community-level soil microbial function in conifer forests of the Pacific Northwest, USA. *Soil Biology and Biochemistry*, 37, 1860-1868.
- Selmants, P.C.** and D.H. Knight (2003) Understory species composition 30-50 years after clearcutting of coniferous forests in southeastern Wyoming. *Forest Ecology and Management*, 185, 275-289.
- Selmants, P.C.**, A. Elseroad, and S.C. Hart (2003) Soils and Nutrients. Ch. 9 in *Ecological Restoration of Southwestern Ponderosa Pine Forests*, P. Friederici (Ed.). Island Press, Washington, DC.

TEACHING

- Instructor, Principles of Ecosystem Ecology (BIO/FOR 479), Northern Arizona University, Spring 2008. Team taught with Paul Dijkstra. Syllabus available upon request.
- Instructor, Sustainable Forestry (FOR 298), Northern Arizona University, Fall 2002. New course developed and team taught with fellow graduate students Dylan Fischer and Jill Clifton. Syllabus available upon request.
- Teaching Assistant, Introductory Biology Laboratory (BIO 1010), University of Wyoming, Fall 1997 and Spring 1998. Taught three laboratory sections per semester of Introductory Biology for non-majors.
- Director, Forfar Field Station, Andros Island, Bahamas, 1996 – 1997. Lecturer/discussion leader on island biogeography, plant communities of Andros, and medicinal and economic botany of Andros.

Guest Lectures

- “Ordination and Community Analysis”, Vegetation Ecology (BOT 5700), University of Wyoming, Fall 1998 and Fall 1999. Course Instructor, Dennis H. Knight.
- “Ecological water relations”, Ecology (BIO 326), Northern Arizona University, Spring 2002. Course Instructor, Nancy Collins Johnson.
- “Biological nitrogen fixation”, Ecology and Management of Forest Soils (FOR 213), Northern Arizona University, Spring 2002. Course Instructor, Stephen C. Hart.

“Plant nutrient use”, Principles of Ecosystem Ecology (BIO/FOR 479) Northern Arizona University, Spring 2006. Course Instructors, Bruce A. Hungate and Stephen C. Hart.
“Acidity and salinity”, Ecology and Management of Forest Soils (FOR 213), Northern Arizona University, Spring 2006. Course Instructor, Stephen C. Hart.

“Phosphorus and micronutrients”, Ecology and Management of Forest Soils (FOR 213), Northern Arizona University, Spring 2007. Course Instructor, Stephen C. Hart.

GRANTS AND AWARDS

EPA Science To Achieve Results (STAR) Graduate Fellowship, 2003-2006

Achievement Rewards for College Scientists (ARCS) Foundation Scholarship, 2003

Merriam-Powell Center for Environmental Research Graduate Fellowship, 2002

USDA Forest Service Administrative Challenge Cost Share Agreement, 1998-2000

Willard Sherman Turrell Herbarium Student Research Award, 1996

UNIVERSITY AND PROFESSIONAL SERVICE

Graduate Student representative to the University Graduate Committee, NAU (2003-2004).

School of Forestry representative to Graduate Student Organization of NAU (2002-2004).

Invited Speaker, NAU Graduate College New Student Orientation (2004).

Reviewer for: *Ecological Applications*, *Forest Ecology and Management*, *Isotopes in Environmental and Health Studies*, *Journal of Applied Ecology*, *Oecologia*, *Soil Biology and Biochemistry*, *Soil Science Society of America Journal*.

PROFESSIONAL MEMBERSHIPS

American Geophysical Union

Ecological Society of America

Soil Science Society of America

OTHER EXPERIENCE

Certified PADI Rescue Diver

Certified OMC outboard engine mechanic