

J. Rafter Sass Ferguson

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RESEARCH AREA

permaculture • farming systems • grassroots networks • political agroecology
multifunctional landscapes • participatory research • popular education

EDUCATION

PhD in Crop Sciences University of Illinois, Urbana-Champaign, IL Dissertation: <i>Permaculture as Farming Practice and International Grassroots Network: A Multidisciplinary Study</i>	2015
MS in Plant and Soil Science University of Vermont, Burlington, VT Concentration: Agroecology and Ecological Landscape Design	2011
B.A. in Anthropology Bard College, Annandale-on-Hudson NY	2001

Graduate Coursework in Agroecology, Political Ecology, Qualitative Methods, Geographic Information Systems, Statistics, Data Management, Ecological Landscape Design, Environmental Microbiology, Ecosystem Modeling

GRANTS AND FELLOWSHIPS

BASE Postdoctoral Research Fellowship with EU project <i>Bottom-up Climate Adaptation Strategies Towards a Sustainable Europe</i> at Faculty of Science of the University of Lisbon (9 months)	2016
Project Drawdown Fellowship (Fall cohort)	2015
AYRE International Research and Learning Fellowship	2015
Agroecology Scholars Program (2 years, full funding)	2013
Graduate College Conference Travel Award	2013
Changing the Face of Farming \$10,000 through crowdfunding campaign with 164 individual donors	2012
Jonathan Baldwin Turner Fellowship (3 years, full funding)	2010
NSRC Theme 1 Graduate Assistant Grant	2009
Teaching Assistantship, University of Vermont	2009
Teaching Assistantship, University of Vermont	2008
Research Assistantship, University of Vermont	2008

SPECIALIZED SKILLS

Farming systems analysis, interdisciplinary/mixed methods, multivariate statistics and data visualization using R, scientific and popular education, participatory methods, ecological design, public speaking, group facilitation, project management, social media.

MAJOR GRANTS SUBMITTED

Yanez, M. Resiliency Collaborative. (Senior Research Fellow/major writer) USDA-NIFA-AFRI: Agriculture and Natural Resources Science for Climate Variability and Change. \$1,000,000

Lovell, S. Intregation Mushrooms with Hoophouse Production on Small Farms. (Graduate Research Assistant/principal writer). USDA-SARE. \$142,482.

Lovell, S., Mendez, V.E. (Graduate Research Assistant/principal writer). Urban Forest Gardening: The Challenges of Soil Contamination and the Opportunities of a Permanent Urban Agriculture. USDA-FS-NUCFAC. \$50,000.

Lovell, S., Mendez, V.E. (Graduate Research Assistant/principal writer). The Economic and Ecological Yields of On-Farm Treed Habitat. NSRC Theme 1 Graduate Assistant Grants. FY 2009-2010, \$25,000. *Awarded.*

ACADEMIC OUTPUTS

Refereed Journal Articles

Ferguson, R. S., & Lovell, S. T. (2014). Permaculture for agroecology: design, movement, practice, and worldview. A review. *Agronomy for Sustainable Development*, 34(2), 251–274. <http://doi.org/10.1007/s13593-013-0181-6>

Ferguson, R. S., & Lovell, S. T. (2015). Grassroots engagement with transition to sustainability: diversity and modes of participation in the international permaculture movement. *Ecology and Society*.

Manuscripts in Preparation

Ferguson, R. S., & Lovell, S. T. Knowledge, empowerment, and human capital at the grassroots: engagement with the international permaculture movement and implications for transition processes.

Ferguson, R. S., & Lovell, S. T. Is there leverage on the margins? Institutional, civic, and professional engagement in the international permaculture movement.

Ferguson, R. S., & Lovell, S. T. Neither magic wand nor pyramid scheme: livelihood diversity and labor efficiency on US permaculture farms.

Ferguson, R. S., & Lovell, S. T. Pushing the edge: land use configuration and multifunctionality on US permaculture farms.

Ferguson, R. S., & Lovell, S. T. Accounting for complexity and variety in diversified farm livelihoods using digitized ranking and allocation methods in field research.

Invited Talks

Ferguson, R. S. (2015). Permaculture as movement and practice: research frontiers and transition strategies. Presented at the Coventry University Centre for Agroecology, Water, and Resilience, Coventry, UK.

Ferguson, R. S. (2015). Permaculture in Theory and Practice: Grassroots Agroecology and Diversified Farms. Presented at Permaculture et agroécologie, Paris, France: AgroParisTech, UMR SAD-APT.

Ferguson, R. S., & Toensmeier, E. (2014). Perennial agriculture now: a global review of perennial staple crops by climate region and nutrient profile. Presented at the American Society of Agronomy International Annual Meeting: Great challenges, grand solutions., Long Beach, CA.

Ferguson, R. S., & Lovell, S. T. (2013). Permaculture research in academia. Presented at the Yale Food Systems Symposium 2013: Urbanization and Food System Transformation, New Haven, CT: Yale University.

Ferguson, R. S. (2013). Permaculture and Agroecological Transition. Presented at the Berkeley Center for Diversified Farming Systems.

Conference Papers

Ferguson, R. S., & Lovell, S. T. (2015). Permaculture as a Catalyst for Agroforestry Adoption: Perennial Production Systems on Diversified Farms. Presented at the 14th North American Agroforestry Conference, Ames, IA: Association for Temperate Agroforestry.

Ferguson, R. S. (2015). Permaculture as Grassroots Network and Farming System: 5 Years of Research. Presented at *12th International Permaculture Conference*. London, UK.

Ferguson, R. S., & Lovell, S. T. (2014). Land use and livelihood diversity on permaculture agroecosystems in the US. Presented at the From Oceans to Mountains. 99th ESA Annual Meeting (August 10 -- 15, 2014), Sacramento, CA.

Ferguson, R. S., & Lovell, S. T. (2013). Recovering the Future: food system transition pathways on (and around) US permaculture farms. Presented at the Yale Food Systems Symposium 2013: Urbanization and Food System Transformation, New Haven, CT: Yale University.

Ferguson, R. S., & Lovell, S. T. (2013). Conservation contra Permaculture: Alternative Ecologies of Multifunctionality and Resistance to Neoliberal Agriculture. Presented at the Dimensions of Political Ecology: Conference on Nature Society., Lexington, KY: University of Kentucky.

Ferguson, R. S., & Lovell, S. T. (2012). From Garden Ecology to Sustainable Agriculture: the Emergence of Permaculture Farms. Presented at the 2nd Int'l Food Studies Conference, Urbana, IL: University of Illinois at Urbana-Champaign.

Ferguson, R. S., & Lovell, S. T. (2012). Hybrid Ecological Knowledge: Permaculture and the Political Ecology of Landscape Regeneration. Presented at the Dimensions of Political Ecology 2012, Lexington, KY: University of Kentucky.

Conference Posters

Ferguson, R. S., & Lovell, S. T. (2015). *Multifunctional Landscapes on US Permaculture Farms: Land Use and Practice on 48 Sites*. Poster presented at the 27th International Congress for Conservation Biology, Montepelier, France.

Sears, E., Warburton-Brown, C., Remiarz, T., & Ferguson, R. S. (2013). *A social learning organisation evolves a research capability in order to study itself*. Poster, Tyndall Centre for Climate Change Research's Radical Emission Reduction Conference.

Ferguson, R. S., & Lovell, S. T. (2013). *Engaging Ecological Literacy from the Ground Up: The Influence and Impacts of the Permaculture Movement*. Poster presented at the Ecological Society of America Annual Meeting 2013: Sustainable Pathways: Learning From the Past and Shaping the Future, Minneapolis, MN.

Other Articles

Ferguson, R. S. (2014). Toward 21st Century Permaculture: Critical Questions and Early Answers. *Permaculture Activist*, (93: Science in Permaculture).

Ferguson, R. S. (2014). Toward 21st Century Permaculture: People's Science or Pseudo-science? *Permaculture Activist*, (93: Science in Permaculture).

PROFESSIONAL EXPERIENCE

Co-Director

Spring 2009 - Fall 2011

Ecological Learning Institute | Burlington, VT

Strategy, communications, research, for non-profit start-up. Projects included: development and implementation of original curriculum on ecological design and community development

for University of Vermont; field trials of effects of biochar on vegetable production; and development of low-tech urban mushroom production enterprise, with monthly workshops on integrated mushroom production, for MacArthur Fellowship recipient Will Allen, at Growing Power, Inc., in Milwaukee, WI.

Consultant

Winter 2007 - Winter 2009

Glenrose Engineering, Inc. | Austin, TX

Research, synthesis, and design specification for constructed wetland, water quality, biogas, and ecosystem restoration projects. Experimental design, management, and monitoring for pilot-scale waste treatment project. Authoring internal research summaries, client reports, and design narratives.

Consultant

Fall 2007 - Winter 2008

The Belen Project | Iquitos, Peru

Research and synthesis for scoping phase of community-driven ecological sanitation project in peri-urban community in Peru. Onsite assessment and stakeholder interview. Liason with regional and international sanitation and health development organizations. Authoring outreach documents and internal strategic reports.

UNIVERSITY TEACHING EXPERIENCE

University of Illinois at Urbana-Champaign

2014

Co-instructor for 8-week graduate seminar "Agriculture Evolving," investigating contemporary controversies in agriculture through the lens of evolutionary biology. Facilitating and synthesizing discussion in weekly meetings, responding to weekly presentations and seminar papers.

University of Vermont

2009

Teaching assistant for an ecological design studio course working on real infrastructure projects in the context of campus greening initiative. Mentoring design groups through all phases of design process, including scoping, literature review, scenario development and evaluation, and refining the final design.

University of Vermont

2008

Teaching assistant for a field ecology survey course for incoming students to the Natural Resources program. Teaching field methods and troubleshooting on weekly lab trips. Grading weekly lab reports and other assignments, working with students on written communication skills with a focus on technical writing and critical thinking.

COMMUNITY TEACHING EXPERIENCE

Liberation Ecology | liberationecology.org

2007 - Present

Extensive and broad-ranging educational efforts for popular and academic audiences, focused on critical perspectives on agriculture, science, environmental management, race, gender, and social change.

Finger Lakes Permaculture Institute, New York. 2010-2014. Annual Permaculture Design Course. Fourteen day Intensive.

Ferguson, R. S. (2015). *Permaculture and Peoples' Science: The State of the Movement and Beyond*. Workshop presented at the 12th International Permaculture Convergence, Essex, UK.

Ferguson, R. S. (2015). *Liberation Ecology: Designing the Permaculture Movement*. Workshop presented at the 12th International Permaculture Convergence, Essex, UK.

Ferguson, R. S. (2015). Nesting/Listening: Design, Scale, and Solidarity, from Project to

Movement. Workshops presented at Liberation Permaculture, Essex, UK.

Ferguson, R. S. (2013). *Toward 21st Century Permaculture: People's Science or Pseudo-science?* Talk presented at the 11th International Permaculture Convergence, Jibacoa, Cuba.

Ferguson, R. S. (2011). *Integrated Mushroom Production for Small Farms*. Talk presented at the Northeastern Organic Farming Association - Summer Conference, Amherst, USA.

Ferguson, R. S. (2010). Mushroom Power! Mycoscaping for Growing Power (Integrated Mushroom Production for Urban Eco-agriculture). Workshop series, Growing Power, Chicago.

Ferguson, R. S., & Krawczyk, M. (2010). *Treeing the Vermont Farmscape*. Northeast Organic Farming Association Winter Conference.

Ferguson, R. S. (2009). Liberation Ecology: Ecological Strategies and Social Objectives. Workshop, Dartmouth College.

Ferguson, R. S. (2009). Permaculture: Grassroots Ecological Design. Workshop, University of Vermont.

Ferguson, R. S. (2008). Permaculture and Sustainable Futures for New York. Cornell Agroforestry Resource Center.