Stephanie G. Yelenik

CURRICULUM VITAE

U.S. Geological Survey, Pacific Islands Ecosystem Research Center

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**Main Research Interests**

* Integration of biogeochemistry and plant community ecology
* Invasions Biology
* Ecosystem Restoration­

**Education**

2008 Ph.D. from the University of California, Santa Barbara, USA. Dept. of Ecology, Evolution, and Marine Biology

* Project: How do invasive grasses alter soil nutrient cycling, and does this feed back to change the ability of native species to recover?
* Supervisor: Jonathan Levine

2000 M.Sc. from the University of Cape Town, South Africa, Botany Dept.

* Project: Differential impacts of N-fixing exotic species on soil nutrient cycling in South Africa, and implications for restoration. M.Sc. awarded with distinction
* Supervisors: David Richardson and William Stock

1997 B.A. from University of California, Berkeley, USA. Dept. of Integrative Biology

**Academic/research Appointements**

April 2013 – present *Research Ecologist*

* U.S. Geological Survey, Pacific Islands Ecosystem Research Center, Volcano, HI
* Botanist/Research Ecologist, GS-11
* Various projects concerning native plant restoration, insect outbreak and ecosystem response, and impacts of native vs. exotic plant species on erosion and hydrology

January 2013 – June 2013 *Lecturer*

* University of Hawaiʻi, Hilo, Dept. of Geography and Environmental Science
* Courses: GEOG/ENSC 494 Restoration Ecology

October 2010 – June 2013 *Post-Doctoral Research Associate*

* University of California, Santa Barbara, Dept. of Ecology, Evolution, Marine Biology
* Project: Impacts of invasive grasses on soils and fire cycles over time, and how this affects ecosystem functioning, native plant restoration, and community resilience in Hawai’i Volcanoes National Park.
* Supervisor: Carla D’Antonio

October 2008 – June 2010 *Post-Doctoral Research Associate*

* Oregon State University, Dept. of Forest Ecosystems and Society
* Project: Regional climate controls over N-fixation rates by early successional shrubs, and how N-inputs affect Northern California post-fire forest productivity and diversity.
* Supervisors: Steven Perakis and David Hibbs

**Publications**

**Yelenik, S.G.**, D’Antonio, C.M. Do self-reinforcing impacts of plant invasions persist over time?

 *Nature*, 502: 517-520.

**Yelenik, S.G**., Perakis, S.S., and Hibbs, D. Regional constraints to N-fixation in post-fire forest communities. *Ecology*, 94: 739-750.

**Yelenik, S.G.** and Levine, J.M. 2011. The role of plant-soil feedbacks in driving native species recovery.

 *Ecology*, 92: 66-74.

**Yelenik, S.G.** and Levine, J.M. 2010. Processes limiting native shrub recovery in exotic grasslands after

 non-native herbivore removal. *Restoration Ecology*, 18: 418- 425.

Hille Ris Lambers, J., **Yelenik, S.G**., Colman, B., and Levine, J.M. 2010. California annual grass invaders:

 the passengers, not drivers of change. *Journal of Ecology*,98: 1147-1156.

**Yelenik, S.G.** and Levine, J.M. 2010. Re-establishment of native shrubs into California exotic annual grasslands: are ecosystem services returned? *Ecological Applications*, 20: 716-727.

**Yelenik, S.G.**, Stock, W.D., and Richardson, D.M. 2007. Functional group identity does not predict

 invader impacts: differential effects of nitrogen fixing exotic plants on ecosystem function.

 *Biological Invasions*, 9:117-125.

Levine, J.M., Pachepsky, E., Kendall, B., **Yelenik, S.G.**, and Hille Ris Lambers, J. 2006. Plant-soil feedbacks and invasive spread. *Ecology Letters*, 9: 1005-1015.

Levine, J.M., Adler, P.B., and **Yelenik, S.G.** 2004. A meta-analysis of biotic resistance to exotic plant

 invasions. *Ecology Letters*, 7: 975-989.

**Yelenik, S.G.**, Stock, W.D., and Richardson, D.M. 2004. Ecosystem-level impacts of invasive *Acacia*

 *saligna* in the South African fynbos. *Restoration Ecology*, 12: 44-51.

**Yelenik, S.**, McClelland, J., Feinstein, N., and Valiela, I. 1996. Changes in N and C stable isotope signatures of particulate organic matter and ribbed mussels in estuaries subject to different

 nutrient loading. *Biological Bulletin*, 191:329-330.

Feinstein, N., **Yelenik, S**., McClelland, J., and Valiela, I. 1996. Growth rates of ribbed mussels in six

 estuaries subject to different nutrient loads. *Biological Bulletin*, 191:327-328.

**Publications in Review/Preparation**

**Yelenik, S.G**., Colman, B., Hille Ris Lambers, J., and Levine, J.M. A mechanism for R\*: plant and microbial

 nitrogen uptake in driving plant competition. In review, *Oecologia*.

DiManno, N., **Yelenik, S.G.**, and D’Antonio, C.M. The role of nurse plants in Hawaiian woodland restoration. In preparation for *Ecological Applications*.

**Grants and Fellowships**

* National Science Foundation (NSF), Research Experience for Undergraduates (REU): co-author with lead-PI Carla D’Antonio. Effects of invasive species on soil carbon cycling. 2012, **$4000**
* NSF, REU: co-author with lead-PI Carla D’Antonio. Efficacy of restoration treatments for *Acacia koa*. 2011, **$4000**
* NSF, Ecosystems cluster: co-author with lead-PI Carla D’Antonio, “Long-term impacts of grass invasions and fire: implications for community dynamics and soil/plant feedbacks.” 2010, **$500,000**
* Oregon State University, College of Forestry Student Mentorship grant. Mentored two students in project exploring effects of fertilization on tree growth rates. 2009, **$4000**
* UCSB Department of Ecology, Evolution, and Marine Biology travel grant. 2008, **$500**
* UCSB Elizabeth Schamberg Burley Graduate Scholarship, for Ph.D research. 2008, **$500**
* UCSB Worster mentorship award. Undergraduate mentee completed independent research project studying plant-soil feedbacks in the greenhouse. 2006, **$2500**
* United States Department of Agriculture, National Research Initiative: Yelenik, S.G. and Levine, J.M. “Plant-soil feedbacks and native coastal sage shrub re-colonization of exotic annual grasslands.” 2005, **$214,000**
* California Native Plant Society Educational Grant for PhD research. 2004, **$2000**
* Southern California Academy of Science Student Research Grant. 2003, **$1000**
* Mildred E. Mathias Graduate Student Research Grant for PhD research in a University of California Natural Reserve. 2002, **$2500**
* National Science Foundation, Research Experience for Undergraduates Fellowship at the Marine Biological Laboratory. Investigated the use of stable isotopes in measuring eutrophication in estuaries. 1996, **$3000**

**TEACHING AND MENTORING EXPERIENCE**

University of Hawaiʻi, Hilo, HI

* Wrote and lectured full semester course, “Ecosystem Restoration”, for the Geography and Environmental Science Department (Spring 2013)

University of California, Santa Barbara, CA

* NSF, REU: Mentored female (2012) and native Hawaiian (2011) undergraduate students in projects examining the effect of invasive species on soil respiration, and plant restoration

Oregon State University, Corvallis, OR

* Mentored two undergraduate students on project exploring the effects of N and P

fertilization on tree growth (2009-2010)

University of California, Santa Barbara, CA

* Teaching Assistant/ Guest lecturer: Field Plant Ecology (2005-07)
* Mentored undergraduate student on plant-soil feedback greenhouse project (2006)
* Teaching Assistant: Introductory Biology (2004)

San Roque High School, Santa Barbara, CA

* Guest instructor: Santa Cruz Island student field trips (2005-06)

University of California, Los Angeles, CA

* Teaching Assistant: Plant Physiology (2002), Concepts of Biology(2003)

University of Cape Town, South Africa

* Teaching Assistant: Introductory Biology (1999-00)

**DEPARTMENTAL SERVICE**

* Co-chair, Research Associate Seminar Series, 2009

 Oregon State University, Corvallis, Department of Forest Ecosystems and Science

* Co-chair, Graduate Student Symposium Organizational Committee, 2006

 University of California, Santa Barbara, EEMB Department

**PROFESSIONAL SOCIETIES AND SERVICE**

* Member, American Association for the Advancement of Science, Ecological Society of America, Society for Ecological Restoration
* Manuscript reviewer for: *Applied Soil Ecology*, *Biological Invasions, Diversity and Distributions, Ecology, Ecological Applications, Ecology Letters, Ecosystems, Environmental Management, Functional Ecology, Journal of Ecology, Journal of Vegetation Science, New Phytologist, Oecologia, Oikos, Plant Ecology, Plant and Soil, Proceedings of the Royal Society B.*
* Grant reviewer for NSF, Population and Community Ecology cluster.

**PROFESSIONAL WORKSHOPS –statistics and GIS**

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| * Working with ArcGIS for Natural Resources, November 2012. Juniper GIS, Bend OR and Institute for Pacific Island Forestry, Hilo HI: 3 day intensive class on core GIS skills and data management and analysis.
* Analysis of Multivariate Time-Series Data Using State-Space Models, 2012. Ecological Society of America Conference, Portland OR: full day seminar using state-space models to work with long-term data series.
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**PROFESSIONAL WORKSHOPS –teaching/mentoring**

* Safe Space Training, 2010, Oregon State University: training program to become a more knowledgeable ally to the LGBT campus community.

**SELECTED SCHOLARLY PRESENTATIONS**

**Yelenik, S.G.** 2013. Plant-soil interactions, community dynamics and ecosystem management.

 Evolution and Ecology Departmental Seminar, University of California, Davis. **(invited speaker)**.

**Yelenik, S.G.** and Levine, J.M. 2011. Plant-soil feedbacks and native plant restoration. Seminar for the

 Tropical Conservation Biology and Environmental Science Program, University of Hawaiʻi, Hilo

 **(invited speaker)**.

**Yelenik, S.G.**, Perakis, S.S. and Hibbs, D. 2010. Competition and facilitation: can N-fixing species

 increase forest productivity after fire? Departmental Seminar, Forest Ecosystems and Society,

 Oregon State University, Corvallis, OR **(invited speaker)**.

**Yelenik, S.G.** 2008.Ecosystem change with native shrub re-establishment on Santa Cruz Island, CA. *7th*

 *annual Channel Islands Symposium*, Oxnard, CA.

**Yelenik, S.G.**, Colman, B., Hille Ris Lambers, J., and Levine, J.M. 2008. The role of microbes in interspecific plant competition for nitrogen. *93nd annual meeting of the Ecological Society of*

 *America*, Milwaukee, Wisconsin.

**Yelenik, S.G.**, Stock, W.D., and Richardson, D.M. 2003. Ecosystem level impacts of two species of

 nitrogen-fixing invasive alien plants in South African fynbos. *Seventh International Conference*

 *on the Ecology and Management of Alien Plant Invasions*, Ft. Lauderdale, Florida **(invited**

 **speaker).**

**Yelenik, S.G.** and Richardson, D.M. 2000. Ecosystem level impacts of nitrogen-fixing invasive alien

 plants in South African fynbos. MEDECOS 2000: *Ninth International Conference on*

 *Mediterranean-type Ecosystems*, Stellenbosch, South Africa.

**Yelenik, S.G.** and Stock, W.D. 2000. Not all N-fixers are equal: Using resin bags to quantify additions of

 available nitrogen from annual and perennial N-fixing plants. *Ninth Congress of the African*

 *Association for Biological Nitrogen Fixation*, Nairobi, Kenya.

**IN THE PRESS**

* Hawaii research described by EurekALert!, Phys.org, Science Newsline, Technology.org, Science Daily, and e! Science News.
* Hawaii research described in popular science article “A leak in the loop” by K. Suding. *Nature*, 503, 472-473.
* Research is featured in Oregon State University campus newspaper: Dahl, A. “OSU Researcher Targets Invasive Plant Species.” *The Daily Barometer*, May 19, 2010.
* Interviewed for article concerning the sale of invasive plant species: Preston, B. “Area nurseries may be selling invasive species: little shop of horrors?” Santa Barbara Independent, March 13, 2008.
* Popular science article: **Yelenik, S.G.**, Stock, W.D., and Richardson, D.M. 2002. Fertilizing the fynbos. *Velt and Flora*, 88: 164.

**OTHER WORK EXPERIENCE**

2002-2008 *Small business co-founder*

* Native Spaces Garden Design (www.nativespacesdesign.com), Los Angeles, CA
* Helped to found small business, write website, and plan/plant native gardens

2000-2001 *Horticulturist*

* Brooklyn Botanic Garden, New York City, NY
* Worked as an intern in all aspects of garden maintenance and planting in specialty gardens and greenhouses

**Community Service and outreach**

2012*National Parks Service, Kahuku, HI*

* Native plant outplanting and rare plant monitoring, Hawai'i Volcanoes National Park

2011 *National Parks Service Kīlauea paddling hui, Volcano, HI*

* Helped write and organize Hawai'i Tourism Authority Cultural Grant for the Hawai'i NPS paddling team to procure money for building traditional Hawaiian outrigger canoes

2010 *Three Rivers Land Conservancy*, *Portland, OR*

* Helped with logistics and tours for a city-wide day of organized native plant garden tours

2009 *Portland Parks and Recreation*, *Portland, OR*

* English Ivy removal and volunteer organization

2006-2008 *Growing Solutions Restoration Institute*, *Santa Cruz Island, CA*

* Building/maintenance of an on-site Nursery/Greenhouse complex in a remote field site. Helped with ongoing plant propagation, irrigation, and seed collection.

2006-2007 *U.S. National Parks Service*, *Santa Rosa Island, CA*

* Worked with NPS employees to physically restore endemic oak sites degraded by grazing/erosion. Helped create sampling designs to explore restoration success.

2006 *Cheadle Center for Biodiversity and Ecological Restoration*

* Native oak outplanting on the campus of University of California, Santa Barbara

2003 *U.S. National Parks Service, Santa Cruz Island, CA*

* Vegetation mapping for baseline dataset before exotic pig eradication