

# Whalen W Dillon

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## Education

**North Carolina State University** (expected May 2016) PhD Forestry & Environmental Resources

Dissertation Title: Dynamics of emerging infectious disease in complex landscapes

Advisor: Dr. Ross K. Meentemeyer (rkmeent@ncsu.edu)

Research Topics:

- Disease ecology
- Multi-scale spatial-temporal analyses
- Species distribution modeling
- Plant pathogens and forest communities
- Invasive species impacts
- Interacting disturbances
- Sustainable management
- Applied GIS
- Landscape Ecology
- Decision support systems

**UNC-Charlotte** 2010-2013 PhD program in Geography & Urban-Regional Analysis

Transferred to NCSU to continue research with advisor

**The Evergreen State College** June 2006 Bachelors of Science in Biology

## Publications

- Serra-Diaz, J.M., J. Franklin, **W.W. Dillon**, A.D. Syphard, F.W. Davis, and R.K. Meentemeyer. (2016). California forests show early indications of both range shifts and local persistence under climate change. *Global Ecology and Biogeography*. 25:164-175. DOI: 10.1111/geb.12396
- Tonini, F., **W.W. Dillon**, E.S. Money, and R. K. Meentemeyer. (2016). Spatio-temporal reconstruction of missing forest microclimate measurements. *Journal of Agricultural and Forest Meteorology*. 218-219:1-10. DOI: 10.1016/j.agrformet.2015.11.004
- Haas, S.E., J.H. Cushman, **W.W. Dillon**, N.E. Rank, D.M. Rizzo, and R.K. Meentemeyer. (2016 In Press). Effects of individual, community, and landscape drivers on the dynamics of a wildland forest epidemic. *Ecology*.
- Chen, G., M.R. Metz, D.M. Rizzo, **W.W. Dillon**, and R.K. Meentemeyer. 2015. Object-based assessment of burn severity in diseased forests using high-spatial and high-spectral resolution MASTER airborne imagery. *ISPRS Journal of Photogrammetry and Remote Sensing*. 102:38-47.
- Dillon, W.W.**, S.E. Haas, D.M. Rizzo, and R.K. Meentemeyer. 2014. Perspectives of spatial scale in a wildland forest epidemic. *European Journal of Plant Pathology*. 138:449-465.
- Dillon, W.W.**, R.K. Meentemeyer, J.B. Vogler, R.C. Cobb, M.R. Metz, and D.M. Rizzo. 2013. Range-wide threats to a foundation tree species from disturbance interactions. *Madroño* 60:139-150.
- Cobb, R.C., D.M. Rizzo, K.J. Hayden, M. Garbelotto, J.A.N. Filipe, C.A. Gilligan, **W.W. Dillon**, R.K. Meentemeyer, Y.S. Valachovic, E. Goheen, T.J. Swiecki, E.M. Hansen, and S.J. Frankel. 2013. Biodiversity conservation in the face of dramatic forest disease: an integrated conservation strategy for tanoak (*Notholithocarpus densiflorus*) threatened by sudden oak death. *Madroño* 60:151-164.

## Oral Presentations

- Dillon, W.W.** and R. K. Meentemeyer. 2015. Environmental influences on pathogen spillover in a multi-host forest disease. IALE World Congress, Portland, OR
- Dillon, W.W.**, S.E. Haas, D.M. Rizzo, and R. K. Meentemeyer. 2014. Perspectives of spatial scale in a wildland forest epidemic. US-IALE Annual Symposium, Anchorage, AK (Invited as part of special topics symposium: Impacts of global Change: Linking Across Scales)

- Dillon, W.W.**, R. K. Meentemeyer, J. B. Vogler, R. C. Cobb, M. R. Metz, and D. M. Rizzo. 2012. Range-wide risks to a foundation tree species from disturbance interactions. SEDAAG Annual Meeting, Asheville, NC (PhD Honors Paper)
- Dillon, W.W.**, R. K. Meentemeyer, J. B. Vogler, R. C. Cobb, M. R. Metz, and D. M. Rizzo. 2012. The geographic range of tanoak and the effects of interacting disturbances on the spatial distribution and structure of tanoak communities. Sudden Oak Death 5<sup>th</sup> Science Symposium, Petaluma, CA

### **Posters**

- Gaydos, D.A. **W.W. Dillon**, and R.K. Meentemeyer. 2015. Interacting effects of wildfire disturbance and forest species diversity on an invasive plant pathogen. IALE World Congress, Portland, OR
- Dillon, W.W.**, S.E. Haas, J. DiRenzo, and R.K. Meentemeyer. 2013. Tracking disease intensity in space and time: locating hot spots and identifying superspreaders in a wildland pathosystem. International Pest Risk Modelling and Mapping Workgroup VII, Raleigh, NC
- Dillon, W.W.**, J. DiRenzo, S.E. Haas, and R.K. Meentemeyer. 2013. Understanding factors influencing disease severity in a wildland pathosystem across spatial and temporal scales. US-IALE Annual Symposium, Austin, TX
- Colijn, C.W., M. Cohen, S. Johnston, **W.W. Dillon**, and N.E. Rank. 2012. Factors influencing *Phytophthora ramorum* infectivity on *Umbellularia californica* and testing of a defoliation-based control method. Sudden Oak Death 5<sup>th</sup> Science Symposium, Petaluma, CA
- Dillon, W.W.** 2012. Impacts of novel disturbance interactions on the California spotted owl. US-IALE Annual Symposium, Newport, RI
- Dillon, W.W.** 2012. Multiscale analysis of disease-environment relationships in a heterogeneous landscape. 12<sup>th</sup> Annual Graduate Research Fair, UNC Charlotte, Charlotte, NC
- Dillon, W.W.** 2011. Multiscale analysis of disease-environment relationships in a heterogeneous landscape. Annual Meeting of the Southeastern Division of the Association of American Geographers, Savannah, GA (PhD. Honors Poster)
- Dillon, W.W.**, S.E. Haas, A.L. Johnson, and R.K. Meentemeyer. 2011. Multiscale analysis of disease-environment relationships in an emerging plant pathogen across a heterogeneous landscape. US-IALE Annual Symposium, Portland, OR

### **Awards and Fellowships**

- 2015 US-IALE Student Travel Award – travel support to IALE World Congress (\$500)
- 2014 NASA-MSU Professional Enhancement Award – travel support to US-IALE (\$700)
- 2012 John Fraser Hart Award for Best PhD. Student Paper, SEDAAG Annual Meeting (\$1000)
- 2012 GPSG Graduate Student Travel Award – University of North Carolina at Charlotte (\$800)
- 2012 First Place – *Social Sciences Poster*, UNC Charlotte 12<sup>th</sup> Annual Graduate Research Fair (\$500)
- 2011 Honorable Mention – *Graduate Student Honors Poster Competition (PhD)*, SEDAAG Annual Meeting
- 2011 Graduate Assistant Support Plan Fellowship (four year tuition fellowship) – University of North Carolina at Charlotte (~\$14,800).
- 2011 GPSG Graduate Student Travel Award – University of North Carolina at Charlotte (\$800)
- 2010 GPSG Graduate Student Travel Award – University of North Carolina at Charlotte (\$800)

### **Employment**

- August 2013-Present** Graduate Research Assistant | Center for Geospatial Analytics, NCSU
- August 2010-August 2013** Graduate Research Assistant | Center for Applied GIScience, UNC Charlotte
- April 2009-Present** Sudden Oak Death Field Research Coordinator | UNC Charlotte/NCSU
- November 2007-July 2008** Carpenter | Earthtone Construction, Inc., Sebastopol, CA
- July 2007-November 2007** Restoration Technician | The Center for Social and Environmental Stewardship, Windsor, CA
- March 2003-August 2006** Special Events Supervisor | The Evergreen State College, Olympia, WA

### **Service**

- US-IALE Executive Committee Student Representative**, 2015-2016

**Prairie Ridge Ecostation Citizen Science Walk Guide**, 2014-2015, Raleigh, NC

**GPSG Graduate Research Symposium Organizing Committee Member and Sessions Chair**, 2013, UNC Charlotte, Charlotte, NC

**Treasurer, UNC Charlotte Chapter of Gamma Theta Upsilon**, 2012-13, UNC Charlotte, Charlotte, NC

**Graduate Research Fair Session Moderator**, 2011, UNC Charlotte, Charlotte, NC

**Poverty Simulation Volunteer**, 2010, UNC Charlotte, Charlotte, NC

**Volunteer Research Assistant**, 2007-2008, Bodega Marine Laboratory – Morgan Lab, Bodega Bay, CA

**California County Planning Commissioners Conference Aide**, 2007, Santa Rosa, CA

**Coho Broodstock Program Volunteer**, 2007, Don Clausen Fish Hatchery, Geyserville, CA.

**Middle School Math and Science Tutor**, 2006-2007, Sebastopol, CA

### **Professional Affiliations**

United States Regional Association of the International Association for Landscape Ecology

Ecological Society of America

International Pest Risk Research Group

### **Other Interests**

Science communication

Hiking, backpacking, and camping

Cooking, baking, home brewing

Photography