**Whalen W. Dillon**

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**Education**

2017 **Ph.D. in Forestry and Environmental Resources**,North Carolina State University

*Dynamics of an emerging infectious forest disease in complex landscapes*

2006 **B.S. in Biology**,The Evergreen State College

**Employment**

03/2017 - Present **Postdoctoral Research Associate**, Agronomy Department, University of

Florida

04/2009 - 12/2016 **Field Research Coordinator,** Sudden Oak Death Research Project, UNC Charlotte/NCSU

08/2013 - 08/2016 **Graduate Research Assistant**, Center for Geospatial Analytics, NCSU

08/2010 - 08/2013 **Graduate Research Assistant**, Center for Applied GIScience, UNC Charlotte

11/2007 - 07/2008 **Carpenter**, Earthtone Construction, Inc.**,** Sebastopol, CA

07/2007 - 11/2007 **Restoration Technician,** The Center for Social and Environmental

Stewardship**,** Windsor, CA

03/2003 - 08/2006 **Special Events Supervisor**, The Evergreen State College,Olympia, WA

**Publications**

**Dillon, W.W.** and R.K. Meentemeyer. *In Press*. Direct and indirect effects of forest microclimate on pathogen spillover. *Ecology*.

**Dillon, W.W.,** Lieurance, D., Hiatt, D.T., Clay, K., Flory, S.L. 2018. Native and Invasive Woody Species Differentially Respond to Forest Edges and Forest Successional Age. *Forests* *9*, 381. doi: 10.3390/f9070381

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. Effects of individual, community, and landscape drivers on the dynamics of a wildland forest epidemic. *Ecology,* 97:649-660. doi: 10.1890/15-0767.1

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.

***In prep***

**Dillon, W.W.**, M.R. Metz, R.C. Cobb, D.A. Gaydos, and R.K. Meentemeyer. Spillover of an exotic forest pathogen promotes its native reservoir host. Target Journal: *Ecology Letters*.

Hiatt, D.T., **W.W. Dillon**, and S.L. Flory. An experimental method for testing the effects of fuel structure on fire intensity. Target Journal: *International Journal of Wildland Fire*.

**Teaching**

***Guest Lectures***

**Managing complexity and uncertainty in science: Project management.** Course: *Project Team Research: Building skills in agrobiology*. Agronomy Department, University of Florida.

**Habitat modification through plant-fire interactions.** Course: *Ecosystem engineers*. Department of Environmental and Engineering Sciences, University of Florida.

**Spatial Interpolation.** Course: *Introduction to GIS*. Department of Geography and Urban-Regional Analysis, UNC at Charlotte

**Scale.** Course: *Disturbance Ecology*. Biology Department, UNC at Charlotte.

***Workshops***

**Using R to Model, Manipulate, and Manage Spatial Data**. A co-instructed workshop designed to introduce all experience levels to the use of the R computing environment for analyzing spatially explicit data.

**Mentoring**

**Joe DiRenzo (M.S. student)** – Guided in species distribution modeling analysis and contextualizing results.

**Devon Gaydos (Ph.D. student)** – Mentored and helped familiarize with being a graduate student in the program and in the sudden oak death disease system.

**Amelia Johnson (REU student)** – Mentored and demonstrated designing landscape-scale field experiments, data collection, relational database management, and statistical analysis.

**Steven Cabrera (undergraduate)** – Trained and supervised Steven in field methods for ecological forest measurements and estimating tick abundances, data organization, management, and analysis using R software.

**Taylor Clark (M.S. student)** – Guided in analyzing data collected to assess the environmental correlates influencing the distribution and abundance of cogongrass in Florida.

**Elena Meyer (undergraduate)** – Trained and supervised in field methods for ecological forest measurements, estimating tick abundances, and identifying common tick species. I learned a number of botanical species from Elena.

**Trained and supervised eight others (undergraduates, graduates, and postdocs) in field methods, data collection, entry, and organization:** Elizabeth White (UG), Christina Harden (UG), Alison Ochs (UG), Derek Van Berkel (Postdoc), Lindsey Smart (Ph.D), Steve Johnston (M.S.), Kerry Wininger (M.S.), Sarah Haas (Ph.D.)

**Presentations** (\* indicates invited talks)

**Dillon, W.W.**, D.T. Hiatt, A.M. Gardner, M.C. Dietze, B.F. Allan, S.L. Flory. 2018. Examining relationships between fire, plant invasions, and tick-borne disease risk in the southeast United States. Ecological Society of America Annual Meeting, New Orleans, LA.

**Dillon, W.W.**, B.F. Allan, M.C. Dietze, S.L. Flory. 2018. Relationships between fire, plant invasions, and tick-borne disease risk across a climate gradient in the southeast U.S. US-IALE Annual Meeting, Chicago, IL.

**\*Dillon, W.W.** and S.L. Flory 2018. Relationships between fire, plant invasions, and tick-borne disease. Central Appalachians Fire Learning Network Potomac Headwaters, Thurmont, MD.

**\*Dillon, W.W.** 2017. Spatial Scale, Pathogen Spillover, and Coexistence in an Emerging​ Forest Disease. University of Florida, Gainesville, FL.

**Dillon, W.W.** and R. K. Meentemeyer. 2016. Effects of topography, diversity, and interannual climate variability on pathogen spillover. Ecological Society of America Annual Meeting, Ft. Lauderdale, FL.

**Dillon, W.W.** and R. K. Meentemeyer. 2016. Influence of climate variability on pathogen spillover in a multi-host forest disease. US-IALE Annual Meeting, Asheville, NC.

**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 Meeting, Anchorage, AK (Impacts of global Change: Linking Across Scales symposium).

**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 5th Science Symposium, Petaluma, CA.

**Posters**

**Dillon, W.W.**, D.T. Hiatt, B.F. Allan, M.C. Dietze, S.L. Flory.2017. Effects of an invasive grass on fire intensity. Ecological Society of America Annual Meeting, Portland, OR.

**Dillon, W.W.** 2016. Effects of diversity, topography, and interannual climate variability on pathogen spillover. Vector Behavior in Transmission Ecology Annual Meeting, Clearwater, FL.

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 Meeting, Austin, TX.

**Dillon, W.W.**,and R.K. Meentemeyer.2012. Impacts of novel disturbance interactions on the California spotted owl. US-IALE Annual Meeting, Newport, RI.

**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.

**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 Meeting, Portland, OR.

**Awards**

2017 Vector Behavior in Transmission Ecology Travel Award ($1200, funding declined)

2016 ESA-Disease Ecology Section Student Travel Award ($150)

2016 Vector Behavior in Transmission Ecology Travel Award ($300)

2015 US-IALE Student Travel Award ($500)

2014 NASA-MSU Professional Enhancement Award ($700)

2012 John Fraser Hart Award for Best PhD Student Paper, SEDAAG Annual Meeting ($1000)

2012 1st Place – *Social Sciences Poster*, UNC Charlotte 12th Annual Graduate Research Fair ($500)

2011 Honorable Mention – *Graduate Student Honors Poster Competition (PhD)*, SEDAAG Annual Meeting

**Service**

2015-presentCommunications Committee Member, US-IALE

2017-present Reviewer for the UF Postdoc Editors Association

2015-2016 Executive Committee Student Representative, US-IALE

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

2013 GPSG Graduate Research Symposium Sessions Chair, UNC Charlotte

2012-2013 Treasurer, UNC Charlotte Chapter of Gamma Theta Upsilon, UNC Charlotte

2010 Poverty Simulation Volunteer, UNC Charlotte

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

2007 California County Planning Commissioners Conference, Santa Rosa, CA

2007 Coho Broodstock Program, Don Clausen Fish Hatchery, Geyserville, CA

**Reviewer:** *Ecosphere*, *Forest Ecology and Management*, *Forestry: An International Journal of Forest Research*, *The Southeastern Naturalist*, *Journal of Plant Diseases and Protection*, *Journal of Environmental Management*

**Professional Affiliations**

U.S. Regional Association of the International Association for Landscape Ecology (US-IALE)

Ecological Society of America (ESA)

**Professional Development**

2019 A2i (Accelerate to Industry) Symposium, University of Florida

2016 Introduction to Outreach, #SciFund Challenge

2013 Introduction to Spatial Data Analysis in R

**Technical Skills**

* R Statistical Software
* QGIS
* GRASS-GIS
* ArcGIS
* Python
* Git/GitHub
* Markdown/Rmarkdown
* Microsoft Office Suite
* MS Access

**Field Skills**

* Forest vegetation inventory and monitoring
* Backcountry backpacking and camping
* Orienteering – GPS, map & compass
* 4-wheel drive vehicle operation
* Microclimate monitoring equipment maintenance

**Additional Interests**

* Science communication and outreach
* Hiking, backpacking, and camping
* Cooking, baking, home brewing
* Photography

**Research Areas**

* Forest ecology
* Landscape ecology
* Disease ecology
* Ecosystem monitoring
* Species distribution modeling
* Invasive species impacts
* Interacting disturbances
* Sustainable ecosystem management
* Applied GIS
* Quantitative analysis

**References**

Luke Flory (Postdoc supervisor): flory@ufl.edu

Ross Meentemeyer (Ph.D. supervisor): rkmeente@ncsu.edu

Richard Cobb: rccobb@calpoly.edu

David Rizzo: dmrizzo@ucdavis.edu

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