Adam Michael Wilson, Ph.D.

CONTACT INFORMATION

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EDUCATION

Ph.D., Ecology and Evolutionary Biology **2006–2012**
University of Connecticut, Storrs, CT
Committee: John A. Silander (UConn), Daniel Civco (UConn), Alan Gelfand (Duke), Gene Likens (Cary Institute)
Dissertation: *Fire and Climate: the implications of global change in the Cape Floristic Region of South Africa.*

M.S., Earth Science **2001–2003**
University of New Hampshire, Durham, NH
Advisor: Cameron P. Wake
Concentrating in Geochemical Systems and Climate Change
Thesis: *Air Quality, Weather, and Respiratory Visits to the Emergency Room in Portland, Maine and Manchester, New Hampshire*

B.S., Biology, *Summa Cum Laude* **1996–2000**
University of New Hampshire, Durham, NH
Concentrating in Evolutionary Biology and Ecology

PROFESSIONAL EXPERIENCE

Climate & Energy Institute Postdoctoral Research Fellow **2012–Present**
Department of Ecology and Evolutionary Biology
Yale University, New Haven, CT, USA

Environment and Organisms Working Group Member **2012–Present**
National Center for Ecological Synthesis & Analysis (NCEAS)
Santa Barbara, CA, USA
Project 12504: Choosing (and making available) the right environmental layers for modeling how the environment controls the distribution and abundance of organisms

Postdoctoral Research Fellow Advisor: Dr. Walter Jetz **2012–Present**
Department of Ecology and Evolutionary Biology
Yale University, New Haven, CT, USA
NASA Climate and Biological Response project: *Integrating global species distributions, remote sensing information and climate station data to assess recent biodiversity response to climate change*

NASA Graduate Research Fellow **2009–2012**
Department of Ecology and Evolutionary Biology
University of Connecticut, Storrs CT, USA
Research title: *Fire, phenology, and weather: implications of climate change in Mediterranean ecosystems*

Graduate Research Assistant Advisor: Dr. John A. Silander **2006–2009**
Department of Ecology and Evolutionary Biology,
University of Connecticut, Storrs, CT, USA
NSF funded project: *Spatio-Temporal Models of Species Distributions and Biodiversity at High Resolution - Integrating Climate and Population Responses*

Community Forestry Agent, U.S. Peace Corps **2004–2006**
Moroccan Department of Water and Forests,
Arganeraie Biosphere Reserve, Morocco
Developed ethno–botanical guide to the floral biodiversity of Amsittene Mountain Site of Biological and Ecological Interest and assisted local association in the construction of a women's educational center.

Greenhouse Gas Emissions Modeler **2000–2004**
Office of Sustainability Programs, University of New Hampshire &
Clean Air – Cool Planet
Portsmouth, NH, USA
Developed a protocol and toolkit to model greenhouse gas emissions from universities. Used this method to inventory emissions from the University of New Hampshire. Toolkit is now used at over 1,200 universities around the country.

Project Coordinator Advisor: Dr. Cameron P. Wake **2002–2003**
Integrated Human Health and Air Quality Research (INHALE) project
Durham, NH, USA
Coordinated various stakeholders, grant writing, and outreach for $300,000 research project investigating the impact of poor air quality and weather on human health in Northern New England.

Research Assistant Advisor: Dr. Cameron P. Wake **2001–2002**
Climate Change Research Center, University of New Hampshire
Durham, NH, USA
Compiled and analyzed historical data (temp, precipitation, snowfall, sea level, lake ice, etc.) on climate change from New England in the past 100 years.

Research Assistant Advisor: Dr. Marilyn Walker **2000**
Toolik Lake Long-term Ecological Research Station
Institute of Arctic Biology, Alaska
Assisted with phenological studies to understand the potential impacts of climate change on the tundra plant communities at a remote station in the arctic.

Lab Assistant Advisor: Dr. John Aber **1996–2000**
Complex Systems Research Center, University of New Hampshire
Assisted in sample processing, sample analysis, fieldwork, and GIS analysis for Harvard Forest Long-Term Ecological Research Site.

Grants & Fellowships

Total awards to date: **$241,500**

Foreign Research Fellowship (≈$4,000) **2014**
South African National Research Council, Cape Town, South Africa

Yale Postdoctoral Fellowship ($110,000) **2012–2014**
Yale Climate and Energy Institute, Yale University, New Haven, CT, USA

DISCCRS Fellow (≈$2,000) **2013**
DISsertations initiative for the advancement of Climate Change ReSearch
Travel grant to attend week-long retreat/workshop in Colorado Springs, Colorado

NASA Earth Science Graduate Fellowship ($75,000) **2009–2012**
National Aeronautics and Space Administration &
University of Connecticut, Storrs, CT, USA
Research project: *Fire, phenology, and weather: implications of climate change in Mediterranean ecosystems*

UCONN-CESE Research Award ($8,000) **2010**
Center for Environmental Sciences and Engineering Multidisciplinary Environmental Research Awards, University of Connecticut, Storrs, CT
Research project entitled: *Community composition through space and time: developing models of vegetation dynamics*

NASA Graduate Fellowship ($7,500) **2008–2009**
Connecticut NASA Space Grant

Outstanding Scholar Fellowship ($30,000) **2006–2009**
Graduate School, University of Connecticut, Storrs, CT

UCONN-CESE Research Award ($5,000) **2007**
Center for Environmental Sciences and Engineering Multidisciplinary Environmental Research Awards, University of Connecticut, Storrs, CT
Research project entitled: *Multi-spectral Exploration of the Cape Floristic Region of South Africa Fire, Stress, and Species recognition*

Proposal Contributions:

NSF Grant DEB-1046328 ($3 Million) **2010**
University of Connecticut, Storrs, CT, USA
Co-author of climate change and disturbance section and source of preliminary data for successful NSF grant application by Carl Schlichting entitled *Dimensions of Biodiversity: Parallel evolutionary radiations in Protea and Pelargonium in the Greater Cape Floristic Region.*

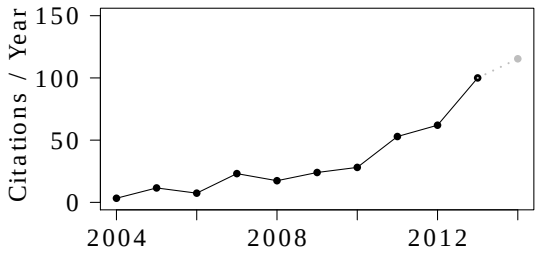
USDA grant #0213933 ($545,000) **2008**
University of Connecticut, Storrs, CT, USA
Source of preliminary data and analysis for successful grant proposal by J. A. Silander entitled: *A multi-scale approach to the forecast of potential distributions of invasive plant species*

Peer Reviewed Publications

Citation Metrics

See http://tinyurl.com/WilsonCV for updates

23 publications
7 first author publications
501 total citations
23 mean citations per article
12 h-index



Published (and in press)

1. **Wilson, A. M.**, Parmentier, B. & Jetz, W. (2014) Systematic landcover bias in Collection 5 MODIS cloud mask and derived products – a global overview. *Remote Sensing of the Environment* 141:149–154. doi:10.1016/j.rse.2013.10.025

2. **Wilson, A. M.** & Silander, J. A. (2014). Estimating Uncertainty in Daily Weather Interpolations: a Bayesian framework for developing climate surfaces. *International Journal of Climatology* 34(8):2573–2584 doi:10.1002/joc.3859

3. Merow, C., Latimer, A. **Wilson, A. M.**, McMahon, S., Rebelo, T., Silander Jr., J. A. (2014). On using Integral Projection Models to generate demographically driven predictions of species distributions: development and validation using sparse data. *Ecography*. doi:10.1111/ecog.00839

4. **Wilson, A. M.**, Parmentier, B., Jetz, W. (2014). "Global 1km MODIS Cloud Mask Processing Path". Dataset #820938. Supplement to: Wilson, Adam M; Parmentier, Benoit; Walter, Jetz (2014): Systematic Landcover Bias in Collection 5 MODIS Cloud Mask and Derived Products - a Global Overview. *Remote Sensing of Environment*. October 23. http://doi.pangaea.de/10.1594/PANGAEA.820938.

5. Keil, P., **Wilson, A. M.**, Jetz, W. (2014). Uncertainty, priors, autocorrelation and disparate data in downscaling of species distributions *Diversity and Distributions*. 20(7):797–812 doi:10.1111/ddi.12199

6. Allen, J. M., Terres, M. A., Katsuki, T., Iwamoto, K., Kobori, H., Higuchi, H., Primack, R. B., **Wilson, A. M.**, Gelfand, A., & Silander, J. A. (2014). Modeling daily flowering probabilities: expected impact of climate change on Japanese cherry phenology *Global Change Biology* 20(4):1251–1263 doi:10.1111/gcb.12364

7. Keil, P., Belmaker, J., **Wilson, A. M.**, Unitt, P., & Jetz, W. (2013). Downscaling of species distribution models: a hierarchical approach. *Methods in Ecology and Evolution* 4:82–94. doi:10.1111/j.2041-210x.2012.00264.x

8. Jiang, X., Dey, D. K., Prunier, R., **Wilson, A. M.**, & Holsinger, K. E. (2013). A New Class of Flexible Link Function with Application to Spatially Correlated Species Co-occurrence in Cape Floristic Region. *Annals of Applied Statistics* 7(4):1837-2457.

9. Ahmed, K. F., Wang, G., Silander, J. A., **Wilson, A. M.**, Allen, J. M., Horton, R., & Anyah, R. (2013) Statistical downscaling and bias correction of climate model outputs for climate change impact assessment in the U.S. northeast. *Global Planetary Change*, 100:320–332. doi:10.1016/j.gloplacha.2012.11.003

10. **Wilson, A. M.**, Silander, Jr. J. A., Gelfand, A. E., & Glenn, J. (2011). Scaling up: linking field data and remote sensing with a hierarchical model. *International Journal of Geographical Information Science*, 25(3):509–521. doi:10.1080/13658816.2010.522779

11. De Klerk, H. M., **Wilson, A. M.**, Steenkamp, K., & Tsela, P. (2011) Evaluation of satellite-derived Burned Area products for the Fynbos, a Mediterranean shrubland. *International Journal of Wildland Fire*, 21(1)36–47. doi:10.1071/WF11002

12. Chakraborty, A., Gelfand, A. E., **Wilson, A. M.**, Latimer, A. M., & Silander, Jr. J. A. (2011). Point Pattern Modeling for Degraded Presence-Only Data over Large Regions. *Journal of the Royal Statistical Society, Series C: Applied Statistics*, 60(5):1–20. doi:10.1111/j.1467-9876.2011.00769.x

13. Merow, C., LaFleur, N., Silander Jr. J. A., **Wilson, A. M.**, & Rubega, M. (2011). Predicting bird-mediated spread of invasive plants across northeastern North America. *American Naturalist*, 178(1):30–43. doi:10.1086/660295

14. **Wilson, A. M.**, Latimer, A. M., Silander, Jr. J. A., Gelfand, A. E. & de Klerk, H. (2010). A Hierarchical Bayesian model of wildfire in a Mediterranean biodiversity hotspot: Implications of weather variability and global circulation. *Ecological Modelling*, 221:106–112. doi:10.1016/j.ecolmodel.2009.09.016

15. Chakraborty A., Gelfand, A. E., **Wilson, A. M.**, Latimer, A. M., & Silander, Jr. J. A. (2010). Modeling large scale species abundance with latent spatial processes. *The Annals of Applied Statistics*, 4(3):1403–1429. doi:10.1214/10-AOAS335

16. Ibáñez, I., Silander, Jr. J. A., Allen, J., Treanor, S., & **Wilson, A. M.**. (2009). Identifying hotspots for plant invasions and forecasting focal points of further spread. *Journal of Applied Ecology*, 46:1219–1228. doi:10.1111/j.1365-2664.2009.01736.x

17. Ibáñez, I., Silander, Jr. J. A., **Wilson, A. M.**, LaFleur, N., Tanaka, N., & Tsuyama, I. (2009). Multivariate forecasts of potential distributions of invasive plant species. *Ecological Applications*, 19(2):359–375. doi:10.1890/07-2095.1

18. Primack, R. B., Ibáñez, I., Higuchi, H., Lee, S. D., Miller-Rushing, A. J., **Wilson, A. M.**, & Silander, Jr, J. A. (2009). Spatial and interspecific variability in phenological responses to warming temperatures. *Biological Conservation*, 142(11):2569–2577. doi:10.1016/j.biocon.2009.06.003

19. **Wilson, A. M.**, Wake, C. P., Kelly, T., & Salloway, J. C. (2005). Air pollution, weather and respiratory emergency room visits in two northern New England cities: an ecological time-series study. *Environmental Research*, 97:312–321. doi:10.1016/j.envres.2004.07.010

20. Keim, B. D., Fischer, M. R., & **Wilson, A. M.** (2005). Are there spurious precipitation trends in the United States Climate Division database?. *Geophysical Research Letters*, 32:L04702. doi:10.1029/2004GL021985

21. **Wilson, A. M.**, Salloway, J. C., Wake, C., & Kelly, T. (2004). Air Pollution and the Demand for Hospital Services: A Review. *Environment International*, 30:1109–1118. doi:10.1016/j.envint.2004.01.004

22. Keim, B. D., **Wilson, A. M.**, Wake, C. P., & Huntington, T. G. (2003). Are there spurious temperature trends in the United States Climate Division database? *Geophysical Research Letters*, 30(7):1404. doi:10.1029/2002GL016295

In Review & Conditionally Accepted

1. **Wilson, A. M.**, Jetz., W. High-resolution Cloud Climatology for Global Land Areas. In review, *Nature*.
2. **Wilson, A. M.**, Latimer, A.M., Silander, J. A. Climatic controls on ecosystem resilience: implications of a changing climate on post-fire regeneration in the Cape Floristic Region. In review, *PNAS*.
3. Parmentier, B., McGill, B., **Wilson, A.M.**, Regetz, J., Jetz, W., Guralnick, R., Tuanmu, M., Robinson, N., Schildhauer, M. Using multi-timescale methods and satellite derived land surface temperature for the interpolation of daily maximum air temperature in Oregon. Conditionally Accepted, *International Journal of Climatology*
4. Parmentier, B., McGill, B., **Wilson, A.M.**, Regetz, J., Jetz, W., Guralnick, R., Tuanmu, M., Robinson, N., Schildhauer, M. An assessment of methods and remotely sensed covariates for regional predictions of 1 km daily maximum air temperature. Conditionally Accepted, *Remote Sensing*.
5. Xie, Y., Ahmed, K.F., Allen, J. M., **Wilson, A. M.**, Silander, J.A., Land surface phenology and climate variation: green-up of deciduous forest communities of northeastern North America. In review, *Landscape Ecology*.

Invited Seminars & Keynotes

1. **Wilson, A. M.** (2014, August). *Climatic controls on ecosystem resilience: combining hierarchical modelling with space borne monitoring of past fire plant biomass accumulation*. Keynote Address, Fynbos Forum, Knysna, South Africa. doi:10.6084/m9.figshare.1142275
2. **Wilson, A. M.** (2014, May). *Ecosystem dynamics: disturbance and recovery in the Cape Floristic Region of South Africa*. Department of Ecology and Evolutionary Biology. University of Connecticut, Storrs, CT. doi:10.6084/m9.figshare.1025883
3. **Wilson, A. M.** (2014, February). *From imperfection to inference: issues of scale and uncertainty in global change biology*. Department of Environmental Science, Policy, and Management Colloquium. UC Berkeley, Berkeley, CA. doi:10.6084/m9.figshare.947682
4. **Wilson, A. M.** (2011, June). *Weather data for phenological analysis*. International Workshop on climate change and phenology, Boston University, Boston, MA.
5. **Wilson, A. M.**. (2010, August). *Climate Change and Fynbos: Fire, Growth, and Survival*. Climate Systems Analysis Group, University of Cape Town, South Africa.
6. **Wilson, A. M.**. (2009, July). *Climate Change, Fire, & Biomass from Space*. South African National Biodiversity Institute, Cape Town, South Africa.

Selected conference presentations & posters

1. Jetz, W., Keil, P., **Wilson, A, M.**, OHara, R.B., Mertes, K. and Domisch, S., (2014) *Integrating Processes and Data Types for Predicting Species Distributions across Spatial Scales.* Presented at the 99th ESA Annual Meeting, Sacramento, CA, August 15. http://eco.confex.com/eco/2014/webprogram/Paper49492.html

2. **Wilson, A, M.**, & Jetz, W., (2014) *High-Resolution Cloud Climatology for Global Land Areas.* Poster presented at the NASA Biodiversity and Ecological Forecasting Team Meeting, Silver Spring, MD, May 8, 2014. https://www.signup4.net/public/ap.aspx?EID=20142567EOID=50

3. Latimer, A. M., **Wilson, A.M.,** & Merow, C. (2014) *Using Statistical Models to Study Climate-Disturbance-Plant Interactions.* Presentation presented at the SAMSI Program on Mathematical and Statistical Ecology, Durham, NC, August. http://goo.gl/NzDhwL.

4. **Wilson, A. M.**, Parmentier, B., McGill, B., Guralnick, R., & Jetz, W. (2013, January). *Incorporating Satellite Derived Cloud Climatologies to Improve High Resolution Interpolation of Daily Precipitation.* Poster presented at the 6th International Conference of the International Biogeography Society, Miami, FL.

5. Moses, K., Noell, N., Casado, D., Rijal, R., Medina, Y., Lewis, L., Mendez, M., Caballero, P., Morales, V., **Wilson, A. M.**, Vezzani, P., Massardo, F., Sancho, L., Russel, S., Cavieres, L. A., Goffinet, B., Rozzi, R. (2013) *Ecotourism with a Hand Lens in the Miniature Forests of Cape Horn: A Sustainable Pathway for Bryophyte Conservation.* In Life on Earth: Preserving, Utilizing, and Sustaining Our Ecosystems. Minnesota, USA: Ecological Society of America.

6. Parmentier, B., McGill, B. Regetz, J., **Wilson, A. M.**, Jetz, W., Guralnick, R., Schildhauer, M., & Narro, M. (2013, January). *Climate Interpolation of Daily Maximum Temperature: Improvements for the Production of Climate Datasets.* Poster presented at the 6th International Conference of the International Biogeography Society, Miami, FL.

7. Keil, P., **Wilson, A. M.**, Belmaker, J., & Jetz, W. (2013, January). *Downscaling of geographical distributions of individual species and species richness.* Poster presented at the 6^{th} International Conference of the International Biogeography Society, Miami, FL.

8. **Wilson, A. M.**, Silander Jr., J. A., & Latimer, A. M. (2012, October). *Climatic controls on ecosystem resilience: Post-fire regeneration in the Cape Floristic Region of South Africa.* Selected speaker at the RCN FORECAST New Investigators Conference: New perspectives on data assimilation in global change science, Woods Hole, MA.

9. Latimer A. M., **Wilson, A. M.**, & Silander, Jr. J. A. (2012, October). *Using data from different scales to model plant population responses.* Presented at the RCN FORECAST New Investigators Conference: New perspectives on data assimilation in global change science, Woods Hole, MA.

10. Keil, P., **Wilson, A. M.**, & Jetz, W. (2012, October). *Combining data of different spatial resolutions to predict species' distributions at fine grain.* Poster presented at the RCN Forecast New Investigators Conference: New perspectives on data assimilation in global change science in Woods Hole, MA.

11. Allen J. M., Katsuki, T., Iwamoto, K., Kobori, H., **Wilson, A. M.**, & Silander, Jr. J. A. (2012). *Japanese Cherry Flowering Responses to Projected Climate Change.* Presented at Phenology 2012 Conference in Milwaukee, WI.

12. Latimer A. M., Merow, C., & **Wilson, A. M.**. (2012, August). *Hierarchical statistical models for ecological data: Combining explanation and prediction*. Presented at the 97^{th} Annual Meeting of the Ecological Society of America, Portland, Oregon.

13. **Wilson A. M.**, Silander Jr. J. A., & Latimer, A. M. (2012, August). *Climatic controls on ecosystem resilience: Post-fire regeneration in the Cape Floristic Region of South Africa* (#36482). Presented at the 97^{th} Annual Meeting of the Ecological Society of America, Portland, Oregon.

14. Kilroy, H.A., **A. M. Wilson**, C. Merow, & J.A. Silander Jr. (2012, July) A new method of estimating fynbos plant community composition via remote sensing, presented at Fynbos Forum, Cape St Francis, South Africa.

15. Allen, J. M., Silander Jr, J. **Wilson, A. M.**, Primack, R. B., Kobori, H., & Katsuki, T. (2011). *Springtime phenological responses in a survival analysis framework*. COS2 - Phenology. presented at the 96^{th} Annual Meeting of the Ecological Society of America, Austin, Texas.

16. de Klerk, H., **Wilson, A. M.**, & Steenkamp, K. (2010). *Evaluation of satellite-derived burned area products for the Fynbos, a Mediterranean shrubland*. Presented at the 5^{th} International Wildland Fire Conference, Sun City, South Africa.

17. **Wilson, A. M.**, Silander, Jr. J. A., Gelfand, A. (2010, April). *Understanding Fire and Climate in Mediterranean Ecosystems: an Integrated Approach*. Land Cover Land Use Change Science Team Meeting, Bethesda, MD.

18. Primack, R.B., Ibáñez, I., Higuchi, H., Lee, S. D., Miller-Rushing, A.J., **Wilson, A. M.**, & Silander, Jr. J. A. (2009, August). *Forecasting trends in species phenological responses to global warming: The predictive potential of multi-site data*. Presented at the 94^{th} Annual Meeting of the Ecological Society of America, Albuquerque, NM.

19. Allen, J., Ibáñez, I., **Wilson, A. M.**, Treanor, S. A., & Silander, Jr. J. A. (2009, April). *Identifying hot spots of plant species invasions and assessing foci of further spread*. Presented at the Odum Conference titled Understanding and managing biological invasions as dynamic processes: Integrating information across space and time. E.N. Huyck Preserve & Biological Research Station, Rensselaerville, NY.

20. Belcon, A., Comita, L., Isbell, F., Linares, R., Rojas, C., & **Wilson, A. M.** (2009, May). *Facilitating Global Change Research in the Tropics: Science and Data Management*. Presented at the Global Change and Tropical Ecosystems Course, Organization for Tropical Studies & Pan-American Advanced Studies Institute, La Selva Biological Reserve, Costa Rica.

21. **Wilson A. M.** (2009, April). *Climate Change, Fire, & Biomass from Space*. Presented to the Global Change and Tropical Ecosystems Course, Organization for Tropical Studies & Pan-American Advanced Studies Institute, La Selva Biological Reserve, Costa Rica.

22. **Wilson, A. M.** (2008, September). *Implications of Climate Change in Mediterranean Ecosystems: Modeling Fire Dynamics*. NASA Northeast Regional Space Grant Meeting, Windsor Locks, CT.

23. **Wilson, A. M.** (2008, May). *Monitoring Wildfire from Space*. Presented at the NSF-USDA International Workshop on Supercomputing Applications in Climate Sciences and Remote Sensing, Cairo, Egypt.

24. **Wilson, A. M.**, Latimer, A. M., Silander, Jr. J. A. (2007, October). *The Fire-Weather Relationship in the South African Fynbos: Implications under Climate Change*. Poster presented at the Integrative Graduate Education and Research Traineeship (IGERT) Conference on Sustainability to Understand Social-ecological systems, Fairbanks, Alaska.

25. Ibáñez, I., Silander, Jr. J. A., **Wilson, A. M.**, & Lafleur, N. (2007). *Challenges of modeling invasive species spread*. Presented at the Ecological Society of America Joint Meeting, San Jose, California.

26. Ibáñez, I., Silander, Jr. J. A., **Wilson, A. M.**, & Lafleur, N. (2007). *Modeling patterns of future plant invasions in the New England region. Colonization versus invasion: do the same traits matter?*, Presented to the Federal Institute of Technology, Ascona, Switzerland.

27. Ibáñez, I., Silander, Jr. J. A., **Wilson, A. M.**, & Lafleur, N. (2007, September). *Challenges of modeling invasive species spread*. Seminar presented to the Department of Ecology, Evolution, and Environmental Biology, Columbia University, New York, New York.

28. Ibáñez, I., Silander, Jr. J. A., **Wilson, A. M.**, & Lafleur, N. (2007, April). *Modeling patterns of future plant invasions in New England*. Harvard Forest Seminar Series, Harvard University, Cambridge, MA.

29. Latimer, A. M., **Wilson, A. M.**, & Silander, Jr., J. A. (2007). *Linking changing climate, productivity, and fire in the Cape Floristic Region: A spatio-temporal Bayesian analysis of fire frequency*. Presented at the ESA/SER Joint Meeting, San Jose, California.

30. LaFleur, N., Ibáñez, I., Silander, Jr. J. A., Mehrhoff, L., & **Wilson, A. M.** (2007). *Modeling patterns of future plant invasions in the New England region*. Presented at the Connecticut Conference on Natural Resources, Storrs, CT.

31. LaFleur, N., Ibáñez, I., Silander, J. A., Mehrhoff, L., & **Wilson, A. M.** (2007, February). *Modeling patterns of future plant invasions in the New England region*. Presented at the Weed Science Society of America Meeting, San Antonio, Texas.

32. **Wilson, A. M.**, Latimer, A. M., Silander, Jr. J. A. (2007). *The Fire-Weather Relationship in the South African Fynbos: Implications under Climate Change (#5608)*. Presented at the Society for Conservation Biology Meeting, Port Elizabeth, South Africa.

33. Wake, C. & **Wilson, A. M.** (2004). *Multiple Indicators of Climate Change Over the Past Century in New England* (#A42A-04). Presented at the AGU Fall meeting, San Francisco, December.

Teaching & Mentoring

Supervision and Mentoring of Undergraduate Research **2008–Present**
University of Connecticut & Yale University

William Freedberg (Yale University, 2013): *Global meteorological station gap analysis.*

Katherine Morrow (University of Connecticut, 2011): *Interspecific variation in fall leaf color.*

Colin Carlson (University of Connecticut, 2011): *Phenotypic plasticity and extinction risk in South African plants: a reaction norm approach to ecological modeling.*

Adam Pellegrini (University of Connecticut, 2009): *Role of topographic variation and micro-climate in driving fine-grain variability of biomass in fynbos shrubland ecosystems.*

John Glenn (University of Connecticut, 2008): *Development of fynbos biomass sampling methods*

Classroom activity contributor **2014**
Developed materials for website accompanying the textbook: Shuster, M., Vigna, J., Sinha, G., Tontonoz, M. (2014). *Scientific American Biology for a Changing World* 2nd Edition. Macmillan Higher Education.

Methods in Spatial Biodiversity Analysis **Fall 2013**
EEB 713, Yale University
Co-developed and taught new course with three sections: 1) methods and tools (Linux; command line scripting; GRASS; advanced R for spatial/environmental data) 2) example *big* datasets (environmental, remote sensing, biodiversity), and 3) example questions, data integration and biostatistics (data-model dichotomy, Bayesian approaches, addressing uncertainty).

Yale Scientific Teaching Fellowship **Fall 2012**
Yale University
Selected through competitive application process for a program designed by Joan Handelsman (President Obama's Associate Director for Science) introducing 'scientific teaching,' an evidence-based approach to STEM education built on engaging students in active learning, leveraging diversity, and assessing student learning. Designed, taught, and revised instructional materials for an introductory level biology course.

Geospatial Cyberinfrastructure: Climate Modeling **2011**
EEB 5894 section 11, University of Connecticut
Co-designed short course to expose graduate students to the science of climate change and global change biology, focusing on accessing and evaluating climate summary and weather station data from various sources. We examined 1) the basics of the climate system 2) how and why our climate is changing, and 3) how to use that knowledge to understand and predict ecological processes.

UConn International Research Experience to South Africa **2008–2010**
University of Connecticut
Served as a mentor to undergraduate students as they developed independent projects and completed four months of field work in South Africa (over three trips). One of my manuscripts was developed from this collaboration.

An Introduction to `R` Programming **2008**
EEB 5894 Section 3, University of Connecticut
Designed and co-taught this course to provide an introduction to the `R` language for graduate and advanced undergraduate students. We covered basic programming principles for ecological modeling and statistics.

Environmental Education **2004–2006**
Department of Water and Forests
Arganeraie Biosphere Reserve, Morocco

Served as an environmental educator in the U.S. Peace Corps. The recent establishment of the Arganeraie Biosphere Reserve limited how villagers could use the surrounding forest and I worked with them to seek alternative and sustainable livelihoods that did not degrade their environment.

Outdoor Education **1996–present**
Various locations in USA, Canada, and South Africa
Served in various outdoor education positions over the last 15 years including the following: Wilderness Guide (1997–1999) at the Maine High Adventure Area, Trip Leader (1996–2000) for the New Hampshire Outing Club, Trip Leader (2003) for Camp Tree Tops in Lake Placid, NY leading a five-week backpacking/kayaking/caving trip in the Canadian Rockies. Recently I've led and assisted with international research expeditions (such as the IRES program mentioned above) and been responsible for safety, environmental education, and navigation for the group in remote areas.

Service

Reviewer for:

University of Chicago Press
Biology Letters (Royal Society)
Bioscience
Ecography
Oecologia
ISPRS Journal of Photogrammetry and Remote Sensing
Remote Sensing of Environment
Journal of the Royal Statistical Society: Series C

Member of:

Ecological Society of America
International Biogeography Society
Union of Concerned Scientists
North American Nature Photographers Association

Workshop Development

Ecosystem Disturbance and Resilience (Co-organizer) **2014**
South African National Biodiversity Institute (SANBI) & University of Cape Town, South Africa.

Biodiversity Informatics Workshop (Co-organizer) **2013**
International Biogeographic Society 6^{th} Biennial Meeting, Miami, FL

Graduate Research Symposium committee (Co-organizer) **2006–2011**
Department of Ecology and Evolutionary Biology, University of Connecticut
Organized an annual symposium for graduate students to present their research.

Software & Computational Skills

Software Expertise:
R (statistical computing and graphics), LINUX/UNIX, SQL, NetCDF Operators (NCO), Climate Data Operators (CDO), Bayesian Gibbs Samplers (OpenBUGS & JAGS), LaTeX, Drupal CMS, GRASS GIS, Quantum GIS, cluster computing (*e.g.* NASA's Pleiades Supercomputer), Inkscape Vector Graphics, Adobe Lightroom Professional Photo Editing Software.

Public code repository available at https://github.com/adammwilson.

R Packages

Wilson, A.M., (2014). *rasterAutocorr: Quickly calculate spatial autocorrelation on 2D rasters.* R package v0.01. https://github.com/adammwilson/rasterAutocorr.

Vieilledent, G., Latimer, A. M., Gelfand, A. E., Merow, C., **Wilson, A.M.**, Mortier, F., Silander Jr., J. A.. (2014). *hSDM: hierarchical Bayesian species distribution models.* R package v1.4. http://CRAN.R-project.org/package=hSDM

Nature Photography

Books

Rozzi, R., Lewis, L., Massardo, F., Medina, Y., Moses, K., Mendez, M., Sancho, L., Vezzani, P., Russell, S., & Goffinet, B., **Photographs by Wilson, A. M.** (2012). *Ecotourism con Lupa en el Parque Omora.* Sub-Antarctic Biocultural Conservation Program, Santiago, Chile.

Goffinet, B., Rozzi, R., Lewis, L., Buck, W., & Massardo, F. **Photographs by Wilson, A. M.** (2012). *Miniature Forests of Cape Horn: Ecotourism with a Hand Lens.* University of North Texas Press, Denton, TX, USA.

Photographic publications, awards, presentations, and exhibitions

Photo Exhibitions **Fall 2010**
Photograph (*Leaf Cutter Ants*) displayed at the Phipps Conservatory and Botanical Gardens, Pittsburgh, PA.

Third Place, Eco-Photo contest **July 2010**
Ecological Society of America

College Photography Scholarship ($1,500) **February 2010**
North American Nature Photographers Association

Winning photograph for the *Naturally Funny* competition **February 2010**
North American Nature Photographers Association

Photographic Contributions **2009–2010**
Over 100 photographs donated to the Organization for Tropical Studies (OTS) for use in promotional literature, calendars, and newsletters.

Conservation Photography Activities & Service

College Committee Member **2010–present**
North American Nature Photographers Association (NANPA)
Duties included judging applicants and organizing their conservation photography project at the annual summit

Co-organizer of *Connecting Through the Lens* **March 2011**
Co-organizer of an intensive two-day conservation photography workshop funded by the Legacy Institute for Nature & Culture held in McAllen, Texas. The workshop empowered photographers to use their craft to connect people to nature, translate science, and

facilitate difficult conversations.

Multi-media mentor **March–April 2011**
Mentor for the production of a short film, *Reconnecting the Rio Grande Valley*, developed by the winners of the 2011 NANPA college scholarship. The film is currently being shown by the U.S. Fish and Wildlife Service. http://vimeo.com/21488710

Project Photographer **January 2011**
Field Photographer for a National Science Foundation funded project (*Integrating ecological sciences and environmental philosophy for bio-cultural conservation in the temperate and subantarctic Ecoregions of southern South America*) in the Chilean Patagonia. Products included photographic contributions to: outreach and educational materials for the Omora Ethnobotanical Park, articles in the *North Texas Daily newspaper* (2/9/2011), *La Prensa Austral* (a Chilean newspaper, 2/21/2011), the *Giornale Di Vicenza* (an Italian newspaper, January 9, 13, 14, 15, 2011), and *el Mercuio* (a Chilean newspaper, 11/13/2012).

Outreach, press, reports, non-peer reviewed publications & software

Yale Climate & Energy blog **2012–Present**
Regular contributor of *perspective* articles and news at http://climate.yale.edu receives ≈3,000 views per month.

PlanetFlux blog **2009–Present**
My blog (http://adamwilson.us/planetflux) *PlanetFlux: Musings on the Science of Global Change, Remote Sensing, Statistical Computing, Scientific Visualization, and more...* receives ≈250 views per month.

Featured graduate student **2010**
University of Connecticut President's Annual Report
What's your spark: Graduate Research at the University of Connecticut

Bejbouji, J., **Wilson, A. M.**, Hmaidouch, A. (2006). *Contribution l'étude de la biodiversité floristique du Jbel Amsitten: Inventaire et utilisation des plantes (Contribution to the study of Floral Biodiversity of Mount Amsitten: An Inventory and Utilization of Plants).* Special Report of the Ministry for the Protection of Water and Forests of the Kingdom of Morocco (in French).

Indicators of Climate Change in the Northeast **2005**
Clean Air - Cool Planet Special Report

Wilson, A. M. *Campus Carbon Calculator^{TM}*. Clean Air-Cool Planet Special Publication. This tool is used at over 1,200 universities across the country to estimate their greenhouse gas emissions. It has become the "tool of record" for most of the 600 signatories to the *American Colleges and University Presidents Climate Commitment.*

Training & Skills

Workshops / Internships / Short Courses:

DISsertations initiative for the advancement of Climate Change ReSearch (Fellow) **2013**
La Foret Conference Center, Colorado Springs, CO, http://disccrs.org/

Georeferencing Workshop (Participant) **2012**
Society for the Preservation of Natural History Collections, Yale University

Global Change and Tropical Ecosystems (Participant) **2010**
Attended six week workshop offered by the Organization for Tropical Studies, Duke University, and the Pan-American Advanced Studies Institute in Costa Rica

Mapping Invasive Plants for IPANE (Participant) **2008**
Attended training for the Invasive Plant Atlas of New England, University of Connecticut

Internship in Sustainable Development (Participant) **1999**
Auroville, Tamil Nadu, India

First Aid:
Certified in Wilderness First Aid, SOLO-New Hampshire (2003), Certified in CPR for the Professional Rescuer (2003), Emergency Medical Technician (EMT-Basic) (2000)

Additional Languages:
Tashelheit (*alias* Berber): the language of the indigenous people of Morocco.

Travel Experience:
To conduct my dissertation research, attend field workshops, and for other reasons, I have visited the following locations outside the Continental U.S. (for the time specified): Morocco (twenty seven months), South Africa (nine months over five trips), India (four months), Alaskan Arctic (three months), Costa Rica (six weeks), Canadian Rockies (five weeks), Chile (four weeks), France (two weeks), Egypt (two weeks), Ireland (two weeks), and Lesotho (two days).

References

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