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Education

Institution	Degree	Year	Concentration
Oak Ridge National Laboratory	Postdoc	1992	Spatial Modeling, GIS
University of Georgia	Postdoc	1991	GIS, UNIX
University of Georgia	PhD	1988	Ecosystem Ecology
University of Georgia	MS	1983	Entomology
Vanderbilt University	BS	1978	General Biology

Professional Employment

ORNL Research Scientist, ORNL Environmental Sciences Division, Ecosystem Sciences Group - 2003-present

Adjunct Faculty, University of Tennessee, Ecology and Evolutionary Biology Department - 2003-present

Adjunct Faculty, University of Tennessee, Forestry, Wildlife, and Fisheries Department - 2005-present

ORNL Research Scientist, ORNL Environmental Sciences Division, Computational and Data Management Technologies Group - 2001-2003

ORNL Research Scientist, ORNL Computational Physics and Engineering Division, Geographic Information and Spatial Technologies Group - 2000-2001

University of Tennessee, under subcontract to ORNL Computational Physics and Engineering Division, Geographic Information and Spatial Technologies Group - 1997-2000

University of Tennessee, under subcontract to ORNL Environmental Sciences Division, Clinch River Environmental Restoration Project - 1994-1997

Selected Peer-reviewed Publications

Hargrove, W.W., F.M. Hoffman, and P.F. Hessburg. 2005. Mapcurves: a generalized algorithm for quantitative comparison of categorical maps. *Journal of Geographical Systems* (in press).

Hargrove, W.W., F.M. Hoffman, and R.A. Efroymson. 2005. A practical map-analysis tool for detecting potential dispersal corridors. *Landscape Ecology* 20(4):in press.

White, M.A., F.M. Hoffman, W.W. Hargrove, and R.R. Nemani. 2005. A global framework for monitoring phenological responses to climate change. *Geophysical Research Letters* 32(4):L04705, doi:10.1029/2004GL021961.

Saxon, E., B. Baker, W.W. Hargrove, F.M. Hoffman, and C. Zganjar. 2005. Mapping environments at risk under different global climate change scenarios. *Ecology Letters* 8:53-60.

Hoffman, F.M., W.W. Hargrove, D.J. Erickson, III, and R. Oglesby. 2005. Using clustered climate regimes to analyze and compare predictions from fully coupled general circulation models. *Earth Interactions* 9:1-27.

Hargrove, W.W., and F.M. Hoffman. 2004. The potential of multivariate quantitative methods for delineation and visualization of ecoregions. *Environmental Management* 34(5):S39-S60, doi: 10.1007/S00267-003-1084-0.

Martinez-Meyer, E., A. Townsend Peterson, and W.W. Hargrove. 2004. Ecological niches as stable distributional constraints on mammal species, with implications for Pleistocene extinctions and climate change projections for biodiversity. *Global Ecology and Biogeography* 13:305-314.

Peterson, A.T., R. Scachetti-Pereira, and W.W. Hargrove. 2004. Potential geographic distribution of *Anoplophora glabripennis* (Coleoptera: Cerambycidae) in North America. *American Midland Naturalist* 151(1):170-178.

Hargrove, W.W., F.M. Hoffman, and B.E. Law. 2003. New Analysis Reveals Representativeness of the AmeriFlux Network. *Eos* 84(48):529-535.

Hargrove, W.W., and F.M. Hoffman. 2003. An analytical assessment tool for predicting changes in a species distribution map following changes in environmental conditions. *Proceedings, GIS/EM4 Conference*, Banff, Alberta, Canada, Sept. 2-8, 2000. CD-ROM, ISBN: 0-9743307-0-1.

Hargrove, W.W., F.M. Hoffman, and P.M. Schwartz. 2002. A Fractal Landscape Realizer for generating synthetic maps. *Conservation Ecology* 6(1): 2. [online]: http://www.consecol.org/vol6/iss1/art2

Huff, D.D., W.W. Hargrove, R.L. Graham, N.T. Nikolov, and M. Lynn Tharp. 2002. A GIS/simulation framework for assessing change in water yield over large spatial scales. *Environmental Management* 29(2):164-181.

Luxmoore, R.L., W.W. Hargrove, M. Lynn Tharp, W. Mac Post, M.W. Berry, K.S. Minser, W.P. Cropper, Jr., D.W. Johnson, B. Zeide, R.L. Amateis, H.E. Burkhart, V.C. Baldwin, Jr., and K.D. Peterson. 2002. Addressing multi-use issues in sustainable forest management with signal-transfer modeling. *Forest Ecology and Management* 165:295-304.

Chen, L., M.W. Berry, and W.W. Hargrove. 2001. Using dendronal signatures for feature extraction and retrieval. *International Journal of Imaging Systems and Technology* 11(4):243-253.

Clark, M.E., K.A. Rose, D.A. Levine, and W.W. Hargrove. 2001. Predicting climate change effects on Appalachian trout: combining GIS and individual-based modeling. *Ecological Applications* 11(1):161-178.

Hargrove, W.W., F.M. Hoffman, and T.L. Sterling. 2001. The do-it-yourself supercomputer. *Scientific American* 256(2):72-79.

Hargrove, W.W., R.H. Gardner, M.G. Turner, W.H. Romme, and D.G. Despain. 2000. Simulating fire patterns in heterogeneous landscapes. *Ecological Modelling* 135(2-3):243-263.

Huff, D.D., W.W. Hargrove, M.L. Tharp, and R.L. Graham. 2000. Managing forests for water yield: the importance of scale. *Journal of Forestry* 98(12):15-19.

Jager, H.I., W.W. Hargrove, C.C. Brandt, A.W. King, R.J. Olson, J.M.O. Scurlock, and K.A. Rose. 2000. Constructive contrasts between modeled and measured climate responses over a regional scale. *Ecosystems* 3(4):396-411.

Gwo, J.P., F.M. Hoffman, and W.W. Hargrove. 2000. Mechanistic-based genetic algorithm search on a Beowulf cluster of Linux PCs. *Proceedings of the High-Performance Computing 2000 (HPC 2000) Conference*, Washington, DC. http://www.pdv.cs.tu-berlin.de/HPC/hpc2000.html

Luxmoore, R.J., W.W. Hargrove, M.L. Tharp, W.M. Post, M.W. Berry, K.S. Minser, W.P. Cropper, D.W. Johnson, B. Zeide, R.L. Amateis, H.E. Burkhart, V.C. Baldwin, Jr., and K.D. Peterson. 2000. Signal-transfer modeling for regional assessment of forest responses to environmental changes in the southeastern United States. *Environmental Modeling and Assessment* 5(2):125-137.

Mann, L.K., A.W. King, R.A. Washington-Allen, W.W. Hargrove, V.H. Dale, T.L. Ashwood, and L.R. Pounds. 2000. The role of soil classification in GIS modeling of habitat pattern: threatened calcareous ecosystems. *Ecosystems* 2(6):524-538.

Stoms, D.M., and W.W. Hargrove. 2000. Modeling potential NDVI to monitor environmental stress. *International Journal of Remote Sensing* 21(2):401-407.

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Tyler, J.A., and W.W. Hargrove 1997. Predicting spatial distribution of foragers over large resource landscapes: a modeling analysis of the Ideal Free Distribution. *Oikos* 79(2):376-386.

Romme, W.H., M.G. Turner, R.H. Gardner, W.W. Hargrove, G.A. Tuskan, D.G. Despain, and R. Renkin. 1997. A rare episode of sexual reproduction in Aspen (*Populus tremuloides* Michx.) following the 1988 Yellowstone fires. *Natural Areas Journal* 17(1):17-25.

Gardner, R.H., W.W. Hargrove, M.G. Turner, and W.H. Romme. 1996. Climate change, disturbances, and landscape dynamics. Pages 149-172 In: B. Walker and W. Steffen (eds.). *Global Change and Terrestrial Ecosystems*. International Geosphere-Biosphere Programme Book Series - Book # 2. Cambridge University Press, Cambridge, Great Britain. 619 pgs.

Plotnick, R.E., R.H. Gardner, W.W. Hargrove, K. Prestegaard, and M. Perlmutter. 1996. Lacunarity analysis: A general technique for the analysis of spatial patterns. *Physical Review* E 53(5):5461-5468.

Tinker, D.B., W.H. Romme, W.W. Hargrove, R.H. Gardner, and M.G. Turner. 1994. Landscape-scale heterogeneity in lodgepole pine serotiny. *Canadian Journal of Forest Research* 24:897-903.

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Hargrove, W.W., and J. Pickering. 1992. Pseudoreplication: a *sine qua non* for regional ecology. *Landscape Ecology* 6(4):251-258.

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Hargrove, W.W. 1988. A photographic technique for tracking herbivory on individual leaves through time. *Ecological Entomology* 13:359-363.

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Seastedt, T.R., D.A. Crossley, Jr., and W.W. Hargrove. 1983. The effects of low-level consumption by canopy arthropods on the growth and nutrient dynamics of black locust and red maple trees in the southern Appalachians. *Ecology* 64(5):1040-1048.