

# Ross K. Meentemeyer

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**EDUCATION**    2000    Ph.D., Geography, University of North Carolina – Chapel Hill  
                  1993    B.S., Physical Geography, University of Georgia

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## AREAS OF SPECIALIZATION

- GIS and remote sensing
- Landscape Ecology
- Biological Invasions
- Landscape Epidemiology
- Environmental Modeling with GIS
- Coupled Human & Natural Ecosystems

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## APPOINTMENTS

2005 to present    *Associate Professor*, Dept. of Geography & Earth Sciences, UNC Charlotte  
2005 to present    *Director*, Center for Applied Geographic Information Science, UNC Charlotte  
2000 to present    *Adjunct Faculty*, Department of Biology, Sonoma State University  
2000 to 2005        *Assistant Professor*, Department of Geography, Sonoma State University  
2000 to 2005        *Director*, Geographic Information Center, Sonoma State University

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## SELECTED PUBLICATIONS (underline indicates student or post doc in my lab)

- Vanwalleghem, T. and **Meentemeyer, R.K.** In press. Predicting forest microclimate in heterogeneous landscapes. *Ecosystems*.
- Vaclavik, T. and **Meentemeyer, R.K.** In press. Invasive species distribution modeling (iSDM): Are absence data and dispersal constraints needed? *Ecological Modelling*.
- Cobb, R.C. **Meentemeyer, R.K.** and Rizzo, D.M. In press. Apparent competition in canopy trees determined by pathogen transmission rather than susceptibility. *Ecology*.
- Ellis, A., Vaclavik, T. and **Meentemeyer, R.K.** In press. When is connectivity important? A case study of the spatial pattern of sudden oak death. *Oikos*.
- Rodman, L. C., Jackson, J., and **Meentemeyer, R. K.** *An Association Rule Discovery System Applied to Geographic Data*, in L. Di and H. K. Ramapriyan, eds., Standards-Based Data and Information Systems for Earth Observations, Springer, 2009. In press.
- Meentemeyer, R.K.**, Rank, N.E., Anacker, B.L., and Cushman, J.H. 2008. Influence of land-cover change on the spread of an invasive forest pathogen. *Ecological Applications* 18:159-171.
- Meentemeyer, R.K.**, Anacker, B., Mark, W., and Rizzo, D.M. 2008. Early detection of emerging forest disease using dispersal estimation and ecological niche modeling. *Ecological Applications* 18: 377-390.
- Cushman, J.H. and **Meentemeyer, R.K.** 2008. Multi-scale patterns of human activity and the incidence of an exotic forest pathogen. *Journal of Ecology* 96: 766-776.
- Meentemeyer, R.K.** N.E. Rank, D. Shoemaker, C. Oneal, D.M. Rizzo. 2008. Impacts of sudden oak death on tree mortality in the Big Sur ecoregion of California. *Biological Invasions* 10: 1243-1255.
- Anacker, B.L., Rank, N.E., Huberli, D., Garbelotto, M., Gordon, S., Whitkus, R., Harnik, T., Meshriy, M., and **Meentemeyer, R.K.** 2008. Susceptibility to *Phytophthora ramorum* in a key infectious host: landscape variation in host genotype, phenotype, and environmental factors. *New Phytologist* 177: 756-766.

- Condeso, T.E. and **Meentemeyer, R.K.** 2007. Effects of landscape heterogeneity on the emerging forest disease Sudden Oak Death. *Journal of Ecology* 95: 364-375.
- Gordon, E. and **Meentemeyer, R.K.** 2006. Effects of dam operation and land use on stream channel morphology and riparian vegetation. *Geomorphology* 82: 412-429.
- Meentemeyer, R.K.** 2006. Application of spatial modeling for early detection of sudden oak death in forest landscapes. *Phytopathology* 96: S144.
- Rodman, L. and **Meentemeyer, R.K.** 2006. Geographical analysis of optimal wind turbine placement in northern California. *Energy Policy* 34:21-37-2149
- Hunter, R. and **Meentemeyer, R.K.** 2005. Climatologically-aided mapping of daily temperature and precipitation. *Journal of Applied Meteorology* 44: 1501-1510
- Meentemeyer, R.K.**, Rizzo, D., Mark, W., and Lotz, E. 2004. Mapping the risk of establishment and spread of Sudden Oak Death in California. *Forest Ecology and Management*. 200: 195-214.
- Kelly, N.M. and **Meentemeyer, R.K.** 2002. Landscape dynamics of the spread of sudden oak death. *Photogrammetric Engineering and Remote Sensing*. 68: 1001-1010.
- Meentemeyer, R.K.** and Moody, A. 2002. Distribution of plant life history types in California chaparral. *Journal of Vegetation Science*. 13: 67-78.
- Meentemeyer, R.K.**, Moody, A. and Franklin, J. 2001. Landscape-scale patterns of chaparral shrub-species abundance: The role of topographically mediated resource gradients. *Plant Ecology* 156; 19-41.
- Moody, A. and **Meentemeyer, R.K.** 2001. Environmental factors influencing spatial patterns of woody plant diversity in chaparral, Santa Ynez Mountains, CA. *Journal of Vegetation Science* 12: 41-52.
- Meentemeyer, R.K.** and Moody, A. 2000. Rapid sampling of plant species composition for assessing vegetation patterns in rugged terrain. *Landscape Ecology* 15(8): 697-711.
- Meentemeyer, R.K.** and Moody, A. 2000. Automated mapping of conformity between topographic and geological surfaces. *Computers & Geosciences*. 26: 815-829.

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## CURRENT RESEARCH FUNDING

- 2009-11 National Science Foundation. \$300,000. Hierarchical analysis of socio-ecological interaction in Charlotte metropolitan region: Can urbanization, forest, and working lands coexist? (PIs: R.K. Meentemeyer, Thill, J.C, Ribarsky, W., Wang, C., and BenDor, T)
- 2006-11 National Science Foundation. \$2,430,000. Sudden Oak Death: Feedback between a generalist pathogen, hosts and heterogeneous environments at multiple spatial and temporal scales (PIs: D.M. Rizzo, R.K. Meentemeyer [\$800,640], and M. Garbelotto)
- 2008-11 National Science Foundation. \$77,456. Impacts of sudden oak death tree mortality on severity of the Big Sur Basin Complex wildfire (PIs: D.M. Rizzo and R.K. Meentemeyer [\$50,400]). Supplement to NSF EF0622771.
- 2009-11 Z. Smith Reynolds Foundation. \$45,000. Modeling Historic and Future Urbanization in North Carolina (PI: R.K. Meentemeyer)
- 2008-09 USDA Forest Service. \$30,000. Modeling the potential and actual distribution of *Phytophthora ramorum* in Oregon. (PI: R.K. Meentemeyer)
- 2007-10 Renaissance Computing Institute. \$1,433,336. Urban-suburban growth and impacts: integrating the power of GIS modeling and visual analytics (PIs: J. Michael, R.K. Meentemeyer, B. Ribarsky, and J.C. Thill)
- 2005-11 USDA Forest Service. \$851,437. Adaptive management of *Phytophthora ramorum* in the Big Sur Ecoregion. (PIs: D. Rizzo, R. Meentemeyer [\$207,652], M. Garbelotto, and F. Davis).