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**Benjamin Levy\***, levy@math.utk.edu, and **Suzanne Lenhart, Charles Collins, Rene Salinas, Marguerite Madden, Joseph Corn** and **William Stiver**. *Modeling Feral Hogs in Great Smoky Mountains National Park to Evaluate Control Efforts and Analyze the Population's Niche*.

Feral Hogs (*Sus scrofa*) are an invasive species that have occupied the Great Smoky Mountains National Park since the early 1900s. Recent studies have revitalized interest in the pest and have produced useful data. Two models were created and analyzed using detailed data on vegetation, mast and harvest history. The first model is discrete in time and space and was formulated to represent hog dynamics in the park. The second is a spatial model of the niche of the population that relates known presence locations to environmental predictors. Together these projects assess the importance of the existing control program and predict suitable locations for hog presence in the Park. (Received August 04, 2015)