Meeting: 1003, Atlanta, Georgia, MAA CP M1, MAA Session on Environmental Mathematics and the Interdisciplinary

1003-M1-635   **Andrew E. Long*** (`longa@nku.edu`), 495 Rossford Ave., Ft. Thomas, KY 41075. *Raccoons Gone Mad! – Modeling an Epidemic of Raccoon Rabies.* Preliminary report.

Raccoon rabies broke out in Connecticut in 1991, and swept across the state in a wave. Using data on the number of cases for each town by month, we characterize the spatial spread, model the effect of the epidemic on a generic town, and estimate various parameters and rates affecting the disease spread and eventual distribution of rabies in the state. Undergraduates have been able to participate in the modeling all along the way, learning and using techniques including Geographic Information Systems, non-linear regression, and Differential Equations. (Received September 25, 2004)