1046-92-74   **David M Chan*** (`dmchan@vcu.edu`), Department of Mathematics, 1001 West Main Street, Richmond, VA 23284, **Rodney J Dyer** (`rjdyer@vcu.edu`), Department of Biology, 1000 West Cary Street, Richmond, VA 23284, and **Erich Foster**, **Alex Feild** and **April McFarland**. *Gene Dispersal in an Insect Pollinated Tree Species.* Preliminary report.

Understanding the methods by which genes are distributed across a landscape is critical in the managment of species. Here we present an agent based model describing pollen-mediated gene flow for both wind and animal mediated dispersal. We use this model to estimate expectations of dispersal distance and pollinator search area for both correlated and uncorrelated random walks. We also introduce variation in plant density to quantify density-dependent dispersal. In general, we find that correlated random walks, as expected for animal dispersal, result in significantly different patterns of gene dispersal across the landscape. (Received July 21, 2008)