

The effect of disturbances on biodiversity in a forest

David Chan^{1,*}, Benjamin Ramage²

¹*Department of Biology, Randolph-Macon College, Ashland, VA 23005*

²*Department of Mathematics & Applied Mathematics, VCU, Richmond, VA 23284*

dmchan@vcu.edu

In a world of climate change disturbances from severe weather events can often be stronger and more frequent. These disturbance events include hurricanes, tornadoes, and even forest fires. An important question to investigate is what is the impact of these disturbances on the biodiversity of forests. In this talk we discuss a model that measures diversity of forest population subjected to different disturbances. Additionally the model incorporates different levels of conspecific negative density dependence, which models the naturally occurring competition between members of the same species.