Effect of Climate Change on Pollination

Othmane Jadi

August 1, 2014

Field Botany and Ecology

Dr. Michael J. Baranski, Instructor

Ms. Sarah Wike, Assistant

Summer Ventures in Science and Mathematics

University of North Carolina at Charlotte

ABSTRACT

The Earth is getting warmer: global temperatures have been predicted to increase by 2°C in the next century. Although this change seems insignificant, it has a significant impact on wildlife and ecosystems around the world. This paper analyzes what the effect of this warming trend has on the pollination of flowering plants through changes in insect behavior and plant physiology. Specifically, it examines the behavioral effects of different weather on pollinator activity. This was done by interpreting pollinator activity on the Grandfather Mountain butterfly garden during two different weather conditions. By concluding that warmer weather reduced pollinator activity, it was concluded that global warming trends may cause a decrease in pollination over time. Another study on the effect of temperature on *Arabidepsis* was analyzed and related to current climate change trends. The study showed a decrease in flowers and fruits in plants that were heat-treated. This research led to the conclusion that increased temperatures due to climate change would cause physiological modifications in certain plants, such as reduced amount of flowers, and would lead to decreased pollination.