Introduction
Problem: What types and frequencies of vectors of disease, i.e mosquitoes, can be found in Belmont Park?
Hypothesis: There will be diversity of mosquitoes in Belmont Park, and some will be potential vectors of West Nile Virus and Eastern Equine Encephalitis.
• West Nile Virus (WNV) is transmitted by Culex and Culiseta mosquitoes
• Eastern Equine Encephalitis (EEE) is transmitted by Culex and Aedes
• Deforestation increases frequency of mosquito vectors

Materials
o Mosquito trap and dry ice bait
o Dissecting microscope
o Moto camera
o DNA isolation materials
o PCR regent
o Electrophoresis gel

Results
We confirmed that three of our samples are potential vectors of West Nile Virus, being in the Culex genus. Additionally, two samples, as Aedes mosquitoes, are potential vectors of Eastern Equine Encephalitis. What we did not anticipate was the number of insect samples that were not mosquitoes at all. Two samples are confirmed flies, three are confirmed midges, and two are confirmed ants.

Discussion
Our hypothesis was proven. There were a multitude of diverse species in our organism samples. It is impossible to know how many of our taxonomic identifications were correct, of the samples not sent to be sequenced, but we can assume they are a combination of mosquitoes and other insects. Regardless, this experiment confirmed our initial hypothesis: There is a great deal of diversity to be found in the mosquito/insect species in Floral Park, as well as potential vectors of disease.

References