



Locally Barcoding Mosquitoes

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Abstract

Mosquitoes are the best disease vectors . Our project intended to locate and identify species of mosquitoes in NYC.

Introduction

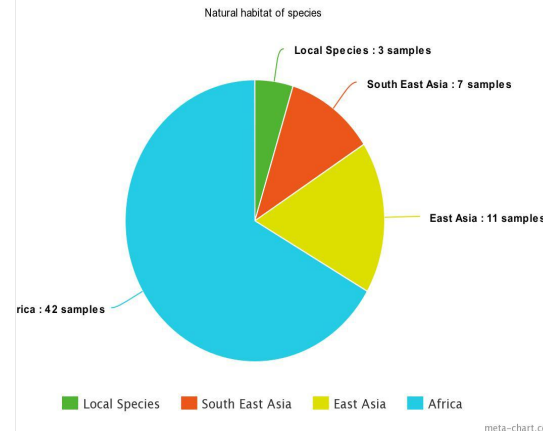
Our group decided to tackle the question: What species of mosquito live in NYC, and more importantly, which specific locations? With diseases like Zika rising and malaria maintaining its position, understanding mosquitos is as important as ever to suppress these diseases. Through our research, we hoped to bring increased understanding to this prominent vector.

Materials & Methods

We used the UBP to find, process, and sequence the mosquitoes. We created collection devices in our local area(Queens and Brooklyn). We then took these samples to and processed them using the protocol given by UBP. We used silica resin beads to extract the DNA and the PCR was performed using COI invertebrate primer and Taq beads. After running it in gels, we got viable DNA sequences to later be sequenced at the CSH Laboratory. After our collection devices didn't work, we collected pond water for any remnants of mosquito or caught mosquitoes out of the air.

Results

Even though we didn't collect a lot of mosquito samples, the other vector samples gave promising results. Cockroaches and flies sequenced show an overwhelming majority of non-native species in NYC. Most being from Africa and Asia with only 3 being from North America. This shows how non-native species have found a way to thrive in NYC



Discussion

Our results weren't numerous enough to draw a conclusion but we were able to conclude some things. With the cockroach and fly samples we had, we found some promising support for our question. Other vectors than mosquitoes were plentiful and NYC and weren't native either. The *Blattella germanica* in particular is especially numerous though it is normally an African cockroach species. References The London Underground Has Its Own Species Of Mosquito - KnowledgeNuts. (2014). Acknowledgements Cold Spring Harbor Laboratory Stuyvesant High School