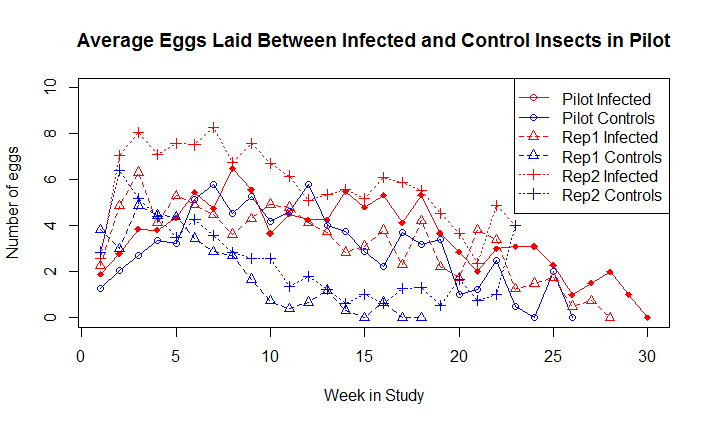
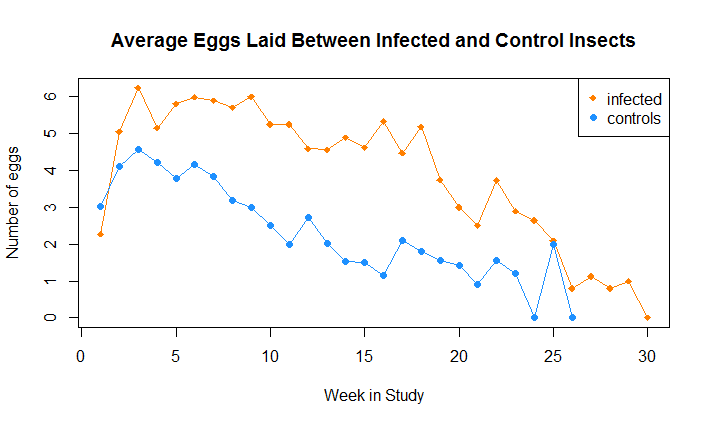
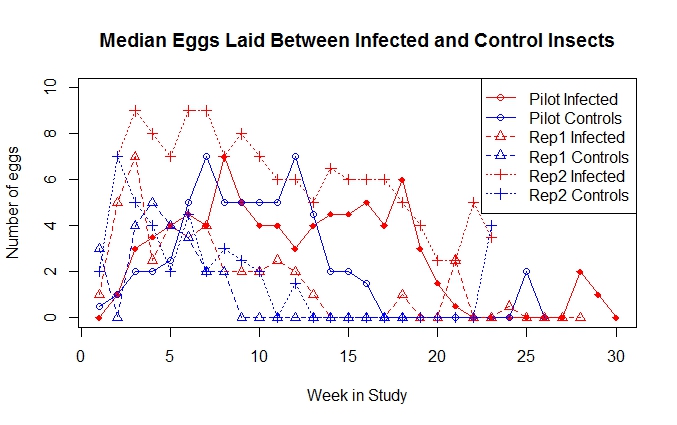
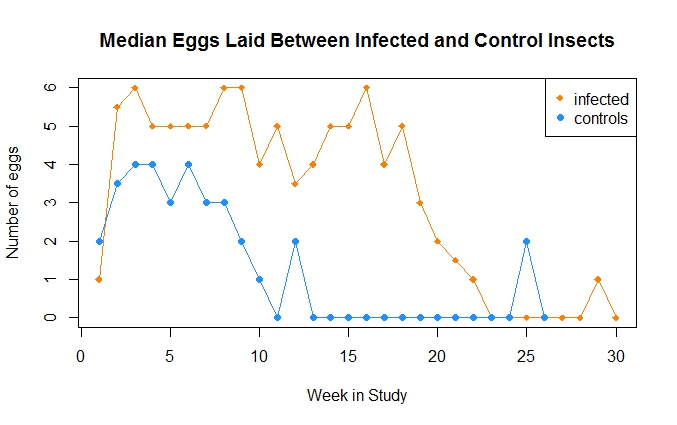
The Effects of T. Cruzi Infection on the Fertility and Fercundity of Cimex *lectularius*.

Introduction

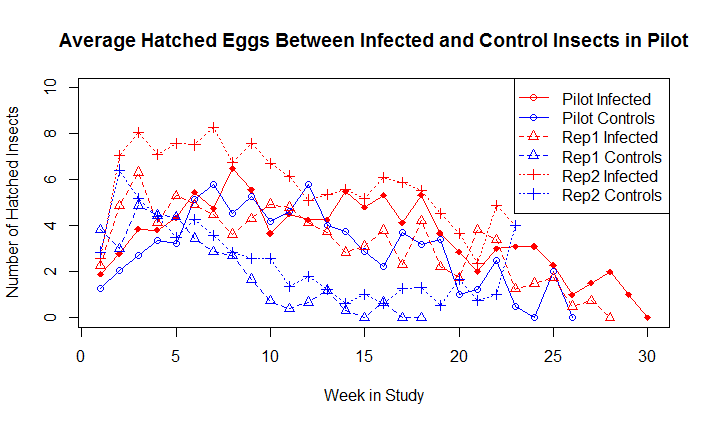
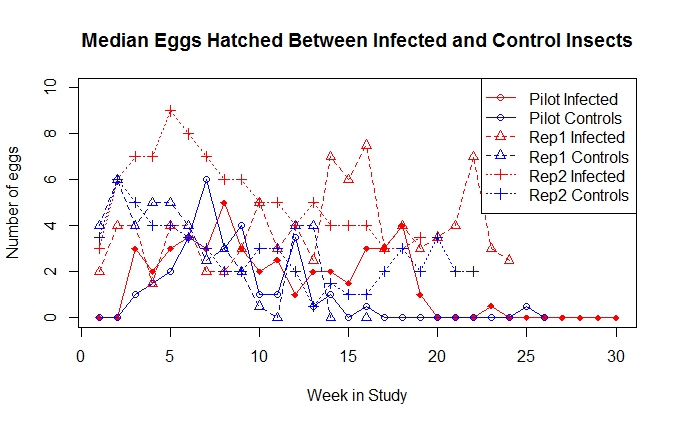
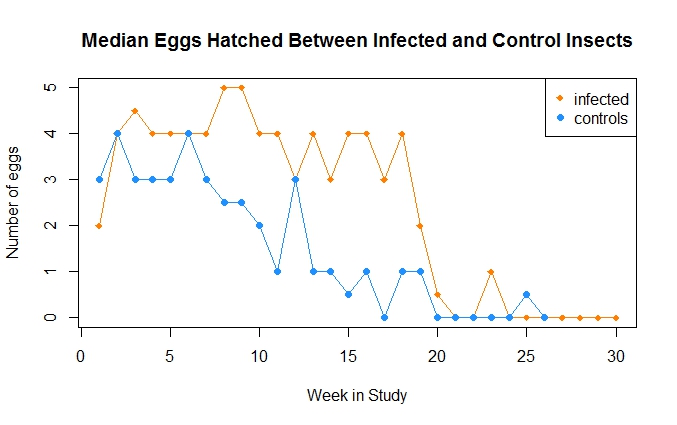
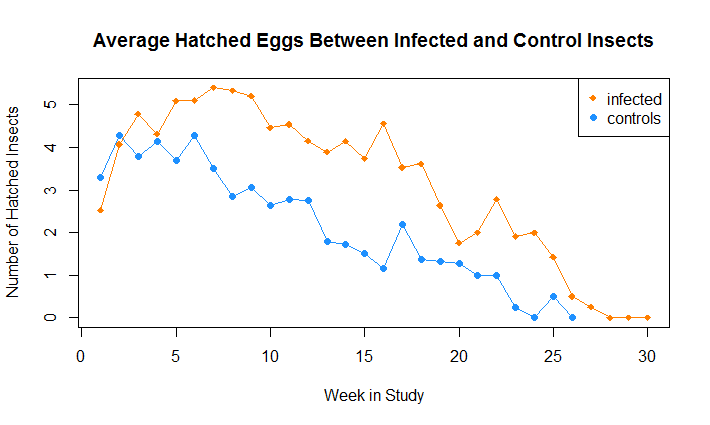
Methods

Data Analysis:

Data was analyzed in R version 3.2.1. First we created a contingency table to identify the number of insects in each group. We found that the infected had laid X eggs and X hatched having a X% viability. The controlled insects had laid Y eggs and Y hatched having a Y% viability. The per capita egg rate was X and Y respectively. The per capita hatch rate was X and Y. We then used the chi squared test to test for significance. The results were Z. The average number of eggs laid and the number of eggs hatched were plotted by controls and then each treatment group. Those graphs are placed below. The same was done for medians as excessive 0’s may be thought to lower these numbers. However, not after removing empty data this does not appear to be an issue.



In order to better understand the variance of the graphs, boxplots were generated to show each treatment group side by side.

However, there are many known confounders in this data that must still be explored. The insects were not all started on the same day, so humidity, temperature, and the varying death rates between infected and controls may affect the results. We must remember that every day event is dependent upon the events that happened before it.

Upon plotting the temperature and humidity, we realized that the data would not be significant as there is little biologically significant variance across both groups as the lab temperatures were maintained steady. Analyzing the effects of humidity may be slightly more complicated.