Terrestrial Insect Sampling

By: Jake Demosthenes, and Jake Papa

Purpose and Hypothesis:

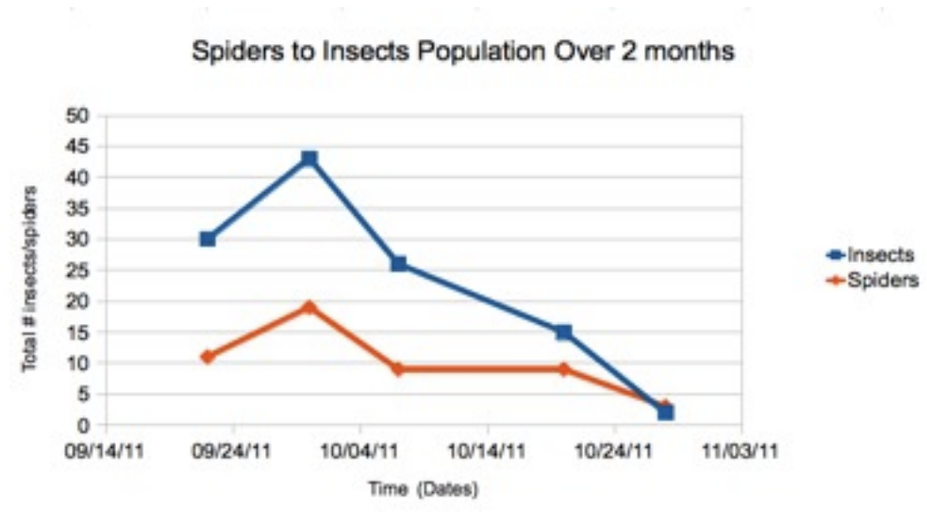
- The purpose for this experiment was to determine how air temperature impacts spider and insect numbers, and to determine if the number of spiders would impact the number of insects.
- There were two hypotheses for this experiment: the first was that the insect and spider numbers would decrease as the weather got colder. The second was that the spider numbers would affect the insect numbers.

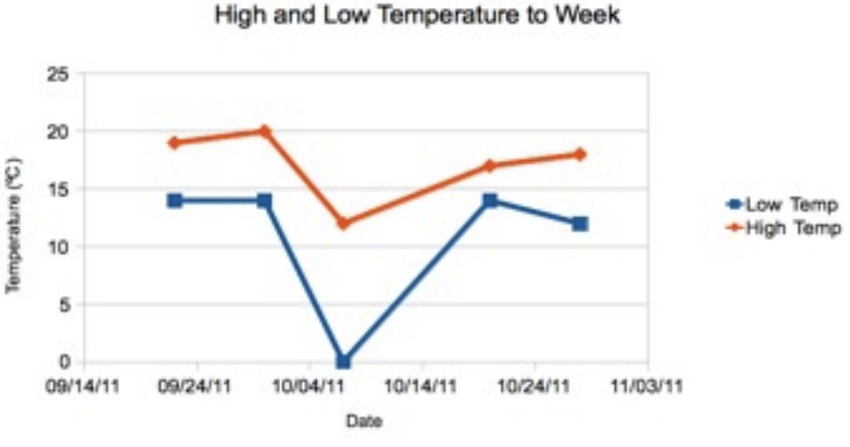
Spider found

Sweeping for bugs

Procedure:

1) Find area to test. The researchers used the location of N 43º 57.404', W 069º 56.956' near the Ecology Center.
2) Sweep area of approximately 4.65 square meters for insects and spiders. Scoop 20 times, with a 30 centimeter diameter net. Sweep the bushes, and all of the grass parts around the dirt paths. Sweep quickly, and with force back and forth
3) Count number of insects and spiders.
4) Identify species caught.
5) Identify plants and vegetation in area.
6) Record data
7) Record air temperature.
8) Once a week, for six weeks use same area and repeat steps 2-7.





Red-Legged Grasshopper

Results and Conclusions:

- The first hypothesis turned out to be correct while the second hypothesis turned out to be incorrect.
- The data from the graphs show that the insect numbers and spider numbers were affected by time and temperature. Cooler temperatures caused less insects and spiders to be found.
- The numbers of both insects and spiders went down and up in sync, it seemed, which was contrary to the second hypothesis. Thus, it was rather difficult to tell which population affected which. It appears that both were affected in the same way.

Special Thanks to Glenn Evans, Cheryl Sleeper, and CREA