

# Cathance Spider Study

by Keith Becker & Hannah Towle

Spider study was a new project this year at the Cathance Preserve. The study's two different problems were studied:

**Problem A:** To determine which species of spiders are found in the Cathance Preserve and what is the distribution between open fields and wooded areas.

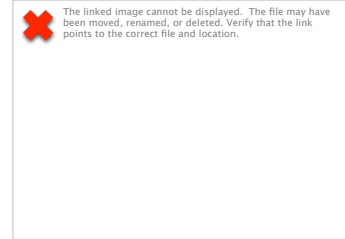
**Problem B:** To determine if spider size affects spider web size.

**Hypothesis A:** If spiders are found, then the majority of spider populations will be found in open fields rather than wooded areas.

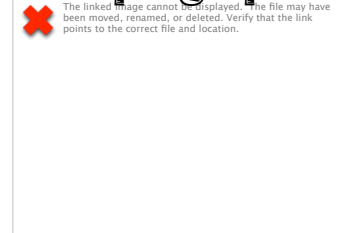
**Hypothesis B:** If there is a larger spider, then the large spider will create a larger web.

## Summary Spider Data Table

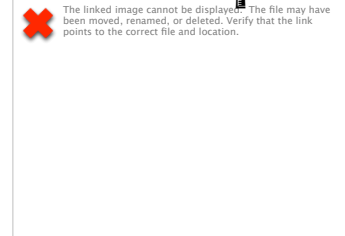
Spider Species	Number Observed	Average Spider Size (cm)	Average Web Dimensions (cm <sup>2</sup> )	Average Height Off Ground (cm)	Average Number of Prey Observed in Web
Wolf	7	5	337.6	21.3	.57
Jumping	5	2.5	113.0	46.1	.2
Grass	2	1.9	301.0	0	.5
Hammock	1	2.5	No Web	N/A	0
Unidentified	6	N/A	72.5	30.5	.5
Unseen	5	N/A	1251.9	3.4	1.6



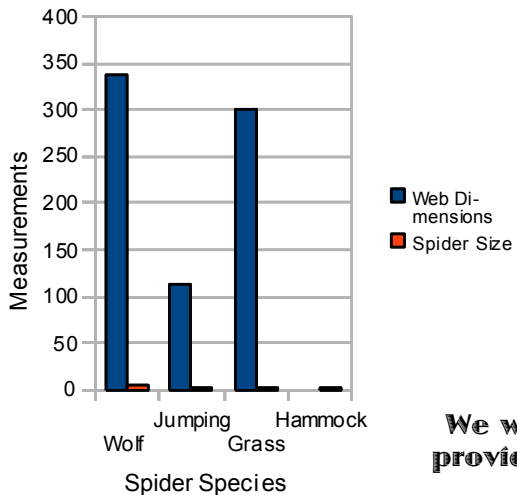
### Jumping Spider



### Grass Spider



Comparison of Average Spider Size to Average Web Size



**Problem A** dealt with what spiders were more prominent in different areas of CREA. At first it was hypothesised that more spiders would be found in the open fields at CREA, but as the study progressed the hypothesis turned out to be wrong. The majority of spiders were actually found on the Barnes Leap Loop Trail, a heavily wooded hiking trail. On average almost twice as many spiders on the Barnes Leap Loop Trail than outside the Ecology Center and the Ecology Center Field combined.

**Problem B** dealt with larger spiders creating a larger web. Wolf spiders, the largest of the spiders, actually had the largest average web dimensions of 337.6 cm<sup>2</sup>. This data supported that the larger spider creates the largest web, right? Well actually something else observed was that Grass spiders, the smallest spider on average (being only 1.9 cm long) on average created a larger average web size (301cm<sup>2</sup>) than the slightly larger Jumping spider (2.5 cm long) whose average web size was 113 cm<sup>2</sup>. The hypothesis stated that larger spiders would create larger webs, which was true, except that the smallest spiders don't always make the smallest webs are supported by the Grass spider.

**We would like to thank Mr. Evans for giving us this opportunity, CREA for providing the specimens and location and Cheryl Sleeper for providing resources, insight, and jellybeans**

### Forest Wolf Spider

Comparison of Locations Where Spiders Were Found

