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Is the Common Teasel (*Dipsacus Sylvestris*) A Carnivorous Plant or Was Francis Darwin Wrong?

This project is testing to see if the common teasel (*Dipsacus sylvestris*) is a carnivorous plant. Francis Darwin suggested this from his study done in 1877. No one has attempted experiments to confirm this as Francis requested, thus our purpose for this study. In 2007, seeds were germinated and 72 plants of the common teasel, *D. sylvestris*, were potted and allowed to grow in a greenhouse. In 2008 they were then planted in plots in a second greenhouse to mature. Experimentation began in 2009 as the plants began to flower. Dead insects were added to the water-holding leaves of 24 plants, plant food added to another 24 plants, and the remaining 24 had only water held by the leaves. The prediction is that plants with insects and plant food would produce more seeds (by definition a characteristic of carnivorous plants). In the fall of 2009 the seed heads were harvested, counted, and weighed as part of a Bio 395 research project. This summer the seed heads were crushed down in order to extract the seeds. The seeds were then counted using equipment provided by Dr. Tim Phillips. Both Dr. Krupa and I spent approximately 50 hours each processing these seeds during June under hot, humid conditions typical when working in a greenhouse. As of the first week of July, we crushed a total of 5281 seed heads and extracted nearly 2.2 million seeds. The current phase of the experiment involves analysis of seed quality. I am now determining the seed density. Samples of seeds from each plant are also being prepared for additional analysis that includes viability, as well as levels of nitrogen, lipids, protein, and carbohydrates. These analyses will be completed by the end of July. In August all statistical analyses will be performed to determine if our experiment supports or refutes Francis Darwin's suggestion that the common teasel is carnivorous. Regardless of the results, we will be using the findings of this study to prepare a manuscript for the *American Journal of Botany*.