
The function and expression of anthocyanin pigments in the carnivorous plant, *Drosera rotundifolia*

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When light stressed, the carnivorous plant *Drosera rotundifolia* expresses red pigments known as anthocyanins, which causes the plants to change from green to red. This study seeks to address the cryptic function of anthocyanin pigments in *D. rotundifolia* by comparing capture rates of different insects between plants with expressed pigments and those without. We will determine when and why anthocyanins are expressed, and if this expression can be limited through increased prey nitrogen levels. Ten plants were chosen to determine if this expression could be depressed. Half of the plants were fed three worms a week for one month and the other half were cut off from all food sources. As a result, fed plants were greener, healthier and produced more leaves per plant. In contrast, unfed plants were smaller, less healthy and more susceptible to necrosis. Histograms showed a drastic decrease in red pigments in fed plants and an anthocyanin extraction protocol was used to confirm the existence of anthocyanins. Using a spectrophotometer we were able to determine the concentration of anthocyanins in both groups of plants.