How Do Seasonal Temperature Changes Affect Cyrtobagous salviniae Density Patterns?

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The purpose of this project was to investigate how seasonal temperature changes affect Cyrtobagous salviniae density patterns. The thesis for this investigation states: If Cyrtobagous salviniae density is measured at several sites in Jean Lafitte NPP over three months, then the density will follow seasonal changes in temperature. To investigate the effect of seasonal temperature change on Cyrtobagous salviniae density patterns, the investigator participated in field data collection and lab data analysis with the assistance of a mentor in order to gain a deeper understanding of Salvinia spp., C. salviniae, invasive species, biological control, and the relationship between C. salviniae and temperature. The investigator also analyzed National Oceanic and Atmospheric Association temperature data to correlate air temperature measured by a NOAA weather tower in the park with weevil density within Jean Lafitte NPP. Through this internship experience, the investigator learned that the density of the weevil appears to follow the trends in percent cover of Salvinia minima which, in turn, follows the trend in seasonal temperature change. As the fall temperatures decrease, Salvinia minima percent cover also decreases; weevil density decreases as the percent cover of S. minima decreases. From this investigation, it was determined that C. salviniae density is directly related percent of Salvinia minima cover rather than seasonal temperature change.

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