



2017 Department of Biology Awards

JOSEPH E. GREAVES ENDOWED SCHOLARSHIP

Mallory A. Hagadorn, Doctoral Candidate

My love for nature has been a part of me for as long as I can remember. For the past 26 years, I have lived on the East Coast exploring every inch of my natural surroundings.

Growing up on the Eastern Shore of Maryland my backyard ranged from Chesapeake Bay estuary to land dominated by agriculture. I consider myself lucky to have been exposed to such a variety of ecological habitats and biotic diversity, and hindsight tells me that these youthful experiences were crucial to my evolving love of Biology, and thus, the beginnings of my career in science.

In 2013, I completed my bachelor's degree in Biology from Salisbury University in Salisbury, MD. During my undergraduate career, I was given the opportunity to immerse myself into the world of scientific research. Since then, I have spent my best days loving what I do and doing what I love. As an undergraduate I completed a self-imposed project that culminated in a 54-page PDF online resource, expediting the identification of Maryland scarab beetles by scarab workers and citizen scientists throughout the state. This project propelled me into a master's degree where I earned the NSF Graduate Research Fellowship Program (NSF GRFP). This grant enabled me to continue scarab research at the graduate level. I was honored to become the first student at Salisbury University to ever receive such a distinguished fellowship and I consider myself privileged to be among those that uphold its integrity. The goal of my master's research was to analyze the biodiversity and distribution of dung beetle populations, as well as, the gut microbial composition of specifically *Onthophagus taurus*, on organic and conventionally managed cattle farms throughout Maryland.

Fall of 2016, I joined the Kapheim Lab at Utah State University as a PhD student. My main interests lie in understanding proximate mechanisms underlying the evolution of cooperative behavior. Since my arrival, I have initiated a study to examine the relationships between neuroplasticity, social environment, and reproductive hormones in the solitary ground nesting bee species, *Nomia melanderi*. Through this ongoing research project, I am gaining valuable skills in brain dissection techniques, specimen preservation, and image preparation. I have been trained on and am successfully imaging brains on a confocal microscope at the USTAR building on the Bio-Innovations campus at USU. In addition to conducting research, I have engaged in coursework that will facilitate my research objectives, including an in-depth biological programming and evolution course. I am also an active member of both the Biology Graduate Student Association and the Biology Programming Club. When I am not doing research or coursework, I like exploring nature. My adventures typically consist of casual insect collecting, hiking, kayaking, and exploring new areas. By far, my favorite hobby is adventuring and spending time with my two-year-old niece.

Throughout my doctoral work, I aim to gain a breadth of knowledge to give me a solid foundation as an integrative biologist. Further developing my ability to understand, blend, and apply various topics to research questions will facilitate a greater understanding and interpretation of the data I collect throughout my career. During my graduate career to date, I have been given the opportunity to teach and mentor undergraduate students and researchers. These experiences sparked my interest in teaching. My hope is to pursue a life-long career in academia where I can blend my love for research and passion for disseminating scientific knowledge.