



The Robert L. and Louise B. Jeanne Social Wasp Research Grant supports graduate student research on any aspect of the basic biology of social wasps. It is given annually to a student whose proposed research shows the greatest potential to make a substantive contribution to our understanding of social wasps.

The 2021 winner of the Jeanne Grant is **Ryan Fortune**, who will receive a \$2,500 grant to support his research. Ryan received his bachelor's degree in Biological Sciences, from Florida State University, and is currently a PhD student in the laboratory of Amy Toth, at Iowa State University. The title of Ryan's project is, "Wasp nest building behavior: A window into the genetics of extended phenotypes." Ryan's work will use paper wasps (*Polistes fuscatus*), a species rapidly gaining recognition as an excellent genomic model. He plans to investigate the genetic architecture of extended phenotypes, specifically the nest structure. Ryan plans to look at the transcriptomes of the wasps for potential candidate nest-building genes. To do so, Ryan will first isolate nest-building genes from egg-laying genes by manipulating the nest structure and forcing an upregulation of building behavior. Second, Ryan plans to use RNAi knockdown trials to affect the gene expression of the candidate genes identified during the nest manipulation trials. The awards committee was particularly impressed with the thoroughness of Ryan's design, as well as his dedication to addressing a topic very little is known about. Indeed, his work may represent some of the first endeavors into understanding the genes of nest building in social insects. We look forward to seeing what he discovers.

Sincerely,

The Awards Committee:

Sarah Bengston, Kaitlin Baudier (Co-Chairs)

Rachelle Adams, Floria Mora-Kepfer Uy, Olav Rueppell, Qian Sun