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Emerald Ash Borer: Effects of State Parks and Visitor Knowledge

Agrilus planipennis Fairmaire, or Emerald Ash Borer, is a small beetle native to Asia that has killed millions of Ash trees in North America. The adult beetle itself does not actually do the damage, it's the larvae that burrow into the tree, disrupting the tree's ability to transport water and other key nutrients ("Emerald"). The destruction of these trees is of great loss to the environment as it alters the functionality of ecosystems.

However, the Emerald Ash Borer (EAB) has also affected the United States economy.

According to the USDA Forest Service, EAB has already cost the United States approximately \$10.7 billion ("Cost"). Additionally, many national and state parks have lost trees, visitors, and revenue due to this invasive species. As EAB makes its way across the country, it's crucial that state and national parks in its path have the necessary information to prepare for the inevitable damage the beetles will cause.

The purpose of this study was to gather information on park visitors and to evaluate if the changes the parks may face would drastically affect visitor perceptions and attendance. In order to gain this knowledge, a questionnaire was distributed at four different locations throughout Minnehaha Falls and Fort Snelling State Park. The questionnaire included questions about general demographics and knowledge on emerald ash borer and other tree-related invasive species. There was a total of 401 respondents. Of this group, 50% identified as male, 49.2% identified as female, and 0.8% identified as other. 37.5% of participants had previously been to an area impacted by a tree-related invasive species. It was promising that only 16.7% of respondents had never heard of EAB. This shows that most of the general public has at least

heard of the invasive species. With 55%, most people showed some knowledge of EAB and 8% showed a lot of knowledge. Through data analysis it was also revealed that media was the most common source of information on EAB. 48.6% of respondents said that they learned about EAB through media sources.

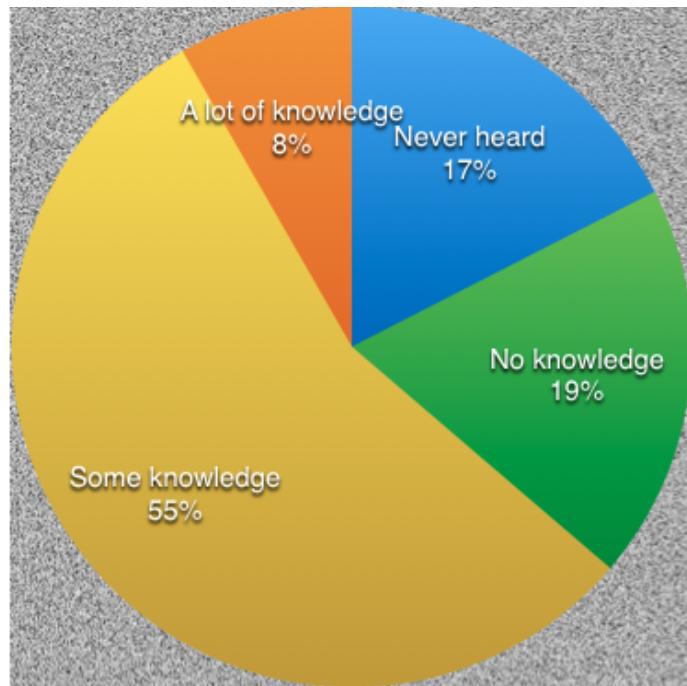


Figure 1. Knowledge distribution of Emerald Ash Borer.

Although it is positive that most people have heard of EAB and have at least some knowledge on the subject, the data still shows a considerable knowledge gap for many. It is important for the general public to be up to date on the issue as they play a crucial part in maintaining this invasive species. Based on where people learn about EAB, the government and park services should consider utilizing media sources more in order to better inform the general public on EAB and how it will affect the lives of those in affected areas.

I believe that I successfully met all of my goals and objectives that I laid out prior to starting this project. I, along with the other faculty and students working on this project, gathered data that will be crucial in better understanding park visitors and how park agencies can prepare and manage the introduction of the emerald ash borer. The collection and evaluation of this vital information would not have happened without the Undergraduate Research Opportunities Program. I thoroughly enjoyed getting hands on experience with real world research and getting a glimpse into a possible career path.

References

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