

Purdue University
Department of Entomology
Undergraduate Capstone
Project Summary

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Project Title:

Native and Invasive Siricidae in Indiana

Project Summary:

Siricidae is a family found within the order Hymenoptera. This family of wasps is commonly referred to as woodwasps; and they are sometimes considered pest species due to the larval stage of this insect attacking tree sapwood. For the purpose of this project, the Siricidae of the United States were looked at and on a more specific level were brought down to just the area of Indiana. The goal of the project was to provide biological assessment of the Siricidae, looking at different species found in foreign countries and their potential harm that could be brought if the species were brought to the United States. Currently, this project is still a work in progress; however, much of the foundational work has been accomplished within the last six months.

To start with, it was important for the researchers to establish what they knew about native and invasive species that are currently found within the state. According to county records there are around six different native species and two invasive species that have shown up in sampling port-entry locations in Indiana. Once information was found about which species were found in the state, the next step was to find out the biology, ecology, mating behavior, etc. about the particular species at hand. This was no easy task since most of the literature on these Siricid species was published in the early 1960's and nothing very current has been published in the last ten years. Non the less, this data was collected and entered into a database.

The next step was to actually look at the specimen collected and that have been placed within collections in Indiana. So far, the Purdue University collection, as well as the private collection of Robert Brown have been data-based. Information of county, state, date, and collector were all entered into an Excel database. With this information, maps of Indiana distribution were created for the native as well as invasive species of Siricidae.

The next step from here with this project would be to look though identification keys along with systematics, the potential related species of Siricids that could be invasive to the United States. With the species found, more information like biology, ecology, and host preferences would need to be recorded. This new information could then be entered into statistical software to predict the potential economic harm that could be caused if these Siricidae were released into the United States. All of this information could then prove to be a helpful addition in regulating, controlling, and monitoring for invasive species.