

A non-native plant species is one introduced to a new geographical area where it doesn't naturally occur. As it doesn't occur naturally, it has no natural predators and can increase in abundance and distribution, the enemy release hypothesis; therefore, non-native plants support fewer arthropods than native plants. Caterpillars, as they interact closely with plants' secondary compounds, are expected to decrease in abundance on non-native plants while spiders who use plants for their structure and as hunting grounds will be affected the least. True bugs and beetles are expected to be moderately affected as they consume plant leaves, inert tissues, use them as hunting grounds, and for their structure. Here, I use *Caterpillars Count!*, a citizen science dataset, to determine how arthropod abundance—density, biomass, and occurrence—is affected by native vs. non-native plants. Analyses were done on all plant species in the dataset than on the Oleaceae and Rosaceae families with a focus on genus-level Lepidoptera richness and the arthropod abundance metrics. Caterpillars and spiders followed the expected trend, but beetles were more weakly affected while true bugs were more strongly affected. Density and occurrence supported the most Lepidoptera genera per branch. Arthropod abundance is known to be affected by evolutionary history, geographic/climatic ranges, and landscape usage. Examining how these affect arthropod abundance is important as with fewer arthropods the food web could be destabilized as insectivores like birds would have less nutritious food.