The Effect of Lonicera maackii on Kentucky's Understory

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Lonicera maackii is an invasive honeysuckle species native to East Asia. There are detailed records on how this species of honeysuckle out-competes and pushes out flora native to Kentucky; it creates dense, shady thickets making it very difficult for Kentucky-based plants to grow and — depending on the method — requires several growing seasons to completely remove. Honeysuckle plants are allelopathic, meaning they stunt the growth of plants around them. This experiment aims to investigate if local plant populations in Kentucky can recover, with time, after the removal of invasive honeysuckle. Specifically, if they can restore their understory complexity and leaf litter biomass to remnant, or normal levels. To test this, 60 plots for understory complexity were conducted and 40 plots for leaf litter biomass, each from the sites recently restored, historically restored, remnant and invaded. They were conducted using 1m by 1m plots. Through statistical analyses and comparisons of the data, it was shown that there was a significant change in leaf litter biomass and understory complexity when comparing recently restored plots to invaded plots. This affirms the research that honeysuckle does inhibit understory growth and proliferation. A conclusion can be drawn that over time, if honeysuckle is removed, over time the local understory and the biodiversity in an area can be restored to a previous state before the invasion.

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