Environmental Science Graduate Program Student Seminar Series

PyroGoat: The utilization of prescribed burning and goat herbivory on the reestablishment of native ground flora and the removal of woody invasive species in a degraded Eastern Oak Forest.

Jeremy Block

- **Smith Lab 3150 | 9/20/19 | 2:00 - 3:00**

Abstract:

The plant community, richness, and diversity of our deciduous forests have been altered over the past century due to our global connectivity, suppression of natural disturbances, and human desire to live in nature. The degradation of our native Eastern Oak Forests has impacted the natural plant communities, food webs, and important nutrient compositions. To halt the deterioration of the Eastern Oak Forests, PyroGoat has been developed to hypothesize a technique to combate the invasive species and regenerate the native vegetation, by which of restoring the natural disturbance regime of the forest. PyroGoat, is focused on utilizing prescribed burning and goat grazing to eliminate woody invasive species, promote Oak regeneration, and re-establish the native ground flora community. Through the initial quantitative data out at Pomerene Agricultural and Forest Research Center, in Coshocton, Ohio, heavy occupation of woody invasive species has altered the plant community, dynamics, and competition of the native fauna. Utilizing the natural fire regime, and the non-selective appetite of Boer Goats, the research should confirm the efficiency of the restoration practices in the forest, leading to a strong layer of nutrient producing ground flora, removal of the majority of woody invasive species, and germination of a strong crop of oak seedlings, which will compete to recolonize the aging and underdeveloped forest canopy.