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Fungal colonization of the invasive plant, lesser celandine

College of Sciences and Health Professions

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Abstract

Lesser celandine (*Ranunculus ficaria*) is an invasive spring ephemeral in Northeast Ohio. This problematic invasive plant forms a dense vegetative mat on forest floors. As a result, *R. ficaria* prevents the establish of many native species of flora. Despite, the growing concerns about the impacts of this species, little is known about the mechanisms underlying its variable success. This study focuses on determining the presence of beneficial fungal associations as a possible explanation for enhanced plant performance. Samples were gathered from eight sites in the Rocky River Metroparks, Ohio along a disturbance gradient from the riverbank. Microscopy was used to determine the presence of fungal colonization within the roots of *R. ficaria*. Cloning and a TRFLP (terminal restriction fragment length polymorphism) analyses were conducted to determine the community composition and relative abundances of the root fungi. Site-based analyses were then conducted to determine if fungal associations could account for variances in establishment and success across test sites.