

Submission Type

Oral Presentation

Presenter Name

Taylor Darnell

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Presenter Organization

Virginia Tech

Presenter Title

PhD Student, Department of Entomology

Presenter Bio

Taylor Darnell is a PhD student in the Invasive Species Research & Extension Lab at Virginia Tech. His background in natural areas, wildlife reserves, and agronomy shapes a practical, cost-effective, solutions-based research philosophy that focuses on applied invasive-plant management. Currently he studies the Japanese knotweed complex, especially how better understanding of fragmentation and chemical speciation may help inform management.

Additional Author-Name, Affiliation & Bio

Jacob Barney, Virginia Tech, Professor, School of Plant and Environmental Sciences
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Abstract Title

Dry but Not Dead: Fragment Viability of Japanese Knotweed After Desiccation

Abstract Summary

Japanese knotweed spreads rapidly in North America by vegetative stem fragments, but how long those fragments stay viable is unclear. This study tested fragment survival from Virginia populations at three growth stages and over harvest delays up to 120 hours, using simulated overland drying and water-inundation to mimic natural dispersal routes. Results will clarify the longevity of viable fragments and inform better management practices.

Conference Themes

- Prevention
- EDRR

TAXA

- Terrestrial Animals

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Abstract Title: Dry but Not Dead: Fragment Viability of Japanese Knotweed After Desiccation

Abstract Summary: Japanese knotweed (*Reynoutria japonica*) is an herbaceous perennial that is highly problematic in North America, especially given its prolific asexual reproduction— often through movement of stem fragments, and tedious management burden. Fragmentation is defined as any plant material that retains the capacity to regenerate a new plant. How long stem fragments remain viable under different environmental scenarios, however, remains less well understood. To address this knowledge gap, we present data on the viability of fragments collected from multiple *R. japonica* populations in Virginia at three distinct physiological stages (early leaf, full leaf, and post flowering) that are subjected to various harvest time intervals (0 – 120 hours). As knotweed often invades riparian corridors that span aquatic-terrestrial interfaces, we will conduct two parallel studies: a simulated overland transport (open air desiccation) and simulated hydrochory (fragment inundation)—reflective of natural dispersal pathways.