

## **Invasion dynamics of false brome in the Clackamas Watershed**

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**Abstract** – The false brome (*Brachypodium sylvaticum*) is an aggressive Eurasian grass that has been spreading rapidly in the Willamette Valley since the early 1980's. This invasive weed has raised alarm among natural resource managers because of its potential to dominate the forest understory vegetation and exclude native wildflowers, ferns, and shrubs. This potentially devastating invader is still in its early stages of spreading, which provides a unique opportunity to investigate the processes of invasion and evolution of aggressively invasive weeds. Our previous work has used DNA fingerprinting to identify its probable origins from Western Europe, and introduction sites near range experiment sites in Oregon. This plant is of particular interest for understanding the evolution of weeds since the European genotypes are not nearly as aggressive as the hybrid genotypes that have established a substantial foothold in Oregon, and are spreading into neighboring Washington and California. Our proposed work, which will involve graduate and undergraduate senior capstone students, will focus on the ecological and genetic processes responsible for the spread, and local domination by this plant. This research will improve our understanding of the general mechanisms of plant invasion, and will inform strategies for the management and control of this exotic weed.