Root foraging for nutrient “hot spots” is a key strategy by which some plants maximize nutrient gain from their carbon investment in roots and mycorrhizal hyphae. Foraging strategies may depend on costs of root construction, with thick roots generally costing more per unit length than thin roots. Moreover, Dr. Eissenstat’s team has found root thickness to be the most important predictor of root lifespan, with thick roots living considerably longer than thin roots. Thus the nutrient foraging strategy of a particular tree species may be strongly influenced by this “payback time”. Investment in mycorrhizal hyphae, which are considerably thinner than roots, may represent an alternative strategy for cost-effective nutrient foraging, especially for thick-root species.

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Mycorrhizal Root Foraging in Temperate Trees

Seminar Host: Lauren Breza, NRESS PhD Student
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