Do Invasive Plant Species Exhibit Greater Phenotypic Plasticity Than Natives?

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Soil Nitrogen

Nitrogen (N) is a critical element for plant growth. Invasive plant species are often found in N enriched habitats, but are also present in N limited habitats like prairies and meadows.

I am interested in how invasive species are able to tolerate a wide range of soil N conditions.

Hairy Cat's Ear (*Hypochaeris radicata)*, an invasive species, grown under high nitrogen conditions (left) and low nitrogen conditions (right).

Experimental Design

Three native and three invasive composite (Asteraceae) will be grown under five levels of soil N.

Morphological and physiological measurements will be used to determine how plastic a species is.

Phenotypic Plasticity

_____This term refers to how an organism alters its morphology or physiology in response to the environment.

If invasive species exhibit greater phenotypic plasticity under different levels of soil N, this may explain why they are able to invade under such a wide array of soil N conditions.