

Trait-based ecology: Where are we now?

Spring 2020 Graduate Seminar

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Credits: 1

Course Number: Zoo 956

Time: Thursdays 12:30-2:00 pm

Location: 447 Birge Hall

Description:

Functional traits, or the characteristics of organisms that serve as proxies for their success and fitness, are gaining popularity in ecological studies. Functional traits are being used to explain the basic ecological mechanisms underlying community assembly, how organisms are responding to global change impacts, and predicting the outcome of conservation and restoration actions. While trait-based ecology is rapidly growing and holds tremendous promise for creating general predictions for large groups of species, there are a number of issues that must be considered when using this approach. These include understanding of the degree to which traits vary within vs. among species, how trait variability changes along environmental gradients, and the degree to which multiple traits are correlated with each other.

This course will use discussion of the primary literature to better understand the past, present, and future of trait-based ecology. We will focus on plants as our target organism (for which there is the most literature), but consider the degree to which trait-based ecology applies across taxa. We will spend a significant amount of time understanding trait variation and the correlation of traits, including “trait spectra” or “trait syndromes” that have been proposed.



Seeds of *Allium falcifolium*. Seed characteristics can serve as functional traits representing the ability to disperse or establish. Photo: E. Damschen