**Accounting for intraspecific trait variation in community trait-environment relationship: A Bayesian approach.**

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Trait-environment relationships are broad patterns that allow us to understand fundamental biological processes ruling species distribution. However, most of the time, trait values are only available at the species level, hence ignoring intraspecific trait variation. Even at large geographical scale, where intraspecific variation is generally less than interspecific variation, ignoring intraspecific trait variation can seriously underestimate the strength of the trait-environment relationship. However, at such scale, gathering trait values at the individual level would be extremely labour intensive. I hope that the Bayesian framework, in which parameters are consider as a random variable rather than fixed, allows to account for interspecific trait variation, even when provided only with species level trait values. I plan to use a hierarchical model to disentangle error that comes from weakness of relationship, and error that comes from intraspecific trait variation. I will test my model using simulated metacommunities before applying it to a dataset of understory plant community of a longleaf pine forest from North Carolina (Ames et al., 2017).