

## introduction

Para1. xxxxxxxx

One promising explanation for the cause of variation in the shapes of SADs is that the degree of deterministic processes governing population dynamics of abundant species and rare species might be potential different [Magurran2003; Supp2015; Umana2017]. Abundant species may be locally abundant because their niches are well-suited for the local environmental conditions [McGill2006; Cornwell2010]. On the other hands, rare species may be more dependent on occasional immigration from the regional species pool [Magurran2003]. If this is the case, incorporating species traits and immigration into a population dynamics model could lead to more realistic patterns of SAD (Fig: hypo). Recently, Falster2017 modeled forest succession using size-structure, trait-based niche-differentiation and immigration, and showed that multiple species can coexist over space and time. However, few experimental studies have tested hypotheses on the effect of different environmental conditions (with species traits) and immigration rates on the species abundance distribution.

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## Results