**Subalpine fir – Engelmann spruce mortality analysis**

*Interactions between climate change and forest disturbance drive disassembly of subalpine forest communities*

*Climate change impacts on subalpine tree mortality depend on landscape-level disturbance*

*Disturbance mediates the effects of climate change on subalpine forests in the western United States*

**Context**

Building off of mortality estimates and community trajectory work from ABLA status/trends paper by focusing on classic species association to dig down on mortality drivers

Major questions would be – Are there interspecific differences in species’ responses that will alter future community compositions? Or something along those lines (*dig back into abla discussion to find language*).

Other research context – large-scale Anderegg paper, but different in that we’re modeling effects on overall mortality, not depending on causal agents; also different in that we’re explicitly considering species associations in community context. Also approach modeling e.g., insect mortality separately from others confounds proximate with contributing mortality sources.

**Analyses**

Using a generalized linear mixed model to quantify the effects of species identity, tree size and condition, stand density, climate anomalies, and disturbance context on individual probability of survival over a ten-year remeasurement period. List out predictors (*i.e.,* how they build off of ABLA status/trends analyses) and potential extensions (*e.g.,* moving to a Bayesian framework to get uncertainty estimates for random effects, adding in regeneration or recruitment analysis).

**Preliminary results**

Sign switches in effect of warming

Importance of tree size; warming worse for large trees

Differences between species; what are the implications for future community-level trajectories and associations?

**Prospective**

**Chart

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