Methods

One current challenge in the modeling approach is the possible collinearity between the independent variables of number of fires and organic layer depth. A solution to this problem would be to collect additional species-level data in the lowland site. Lowland plots have an identical number of fires, but their organic layer depths are known to be different (I.e., Fig. 7B in Chapter 1). Including species-level data from the lowland site would introduce variability, potentially resolving any issues of collinearity. Furthermore, including the lowland site in the analysis would help resolve any potential problems related to small sampling size.

Furthermore, if additional species-level data is collected from the lowland site, comparisons can be made between upland and lowland plots.

~~To investigate the prevalence of different regeneration strategies in post-fire communities across the reburn sequence, we intend to use a permutation test to create a null distribution in which the relative abundance of asexual reproducers is distributed randomly across reburn history and topographic position. This approach will allow us to quantify the difference between the null distribution of randomly distributed asexual reproducers and the observed distribution of asexual reproducers across reburn history, essentially comparing between the mean across all samples, and the means of each reburn history (0, 1, 2 and 3). A p-value of mean difference between the pooled sampled mean and means of each reburn category will be calculating using a two-tailed t-test.~~ [Not doing anymore, need to revise]

## Proposed Timeline

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| **Summer 2018-19** | | **Fall 2018-19** | | | | | **Spring 2020** | | | | |
| June | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | March | April | May |
| Field Sampling | | Literature Review | | | | | Literature Review / Exploratory Data Analysis | | | | |
| Data entry / processing | | | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Summer 2020** | | **Fall 2020** | | | | | **Spring 2021** | | | | |
| June | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | March | April | May |
| Comps | Data Analysis: conduct for Upland site | | | | | | Writing: draft introduction, methods, upland results | | | | |