Quadrat trajectory project

7/20/20

Grass trajectory analysis

Goal: to classify quadrats by the dynamics of total grass cover over 100 years, and to connect the general behavior to soil properties

Data

* Choose set of quadrats that overlap
* Choose set of years for points
  + 1929-1942, skip 1941 (lots missing)
  + 1942-1960, skip 1948, 1953-55
  + If there is a single year missing for a quadrat, do an interpolation?

Analysis

* Calculate distance metric (as in Williamson paper)
* Group quadrats by distance metric
* Describe groups’ behavior

Discussion

* Are there outliers?
* Do soil properties differ between groups?

Shrub trajectory analysis

Goal: to classify quadrats by the dynamics of total shrub cover over 100 years, and to connect the general behavior to soil properties

Data

* Choose set of quadrats that overlap
  + Same as grass analysis
* Choose set of years for points
  + Same as grass analysis
* Limit species
  + Exclude yucca species; they are not long-lived relative to the time scale and can have a disproportionate influence on total shrub cover

Analysis

* Calculate distance metric
* Group quadrats by distance metric
* Describe groups’ behavior

Discussion

* Are there outliers?
* Do soil properties differ between groups?
* Are grass groups correlated to shrub groups?