

Fall 2021
Geog 330

Charmlee Park Stable Boundary

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Introduction

- The Woolsey fire ignited November 8, 2018 and burned approximately 96,000 acres across Los Angeles and Ventura counties, Charmlee Park included
- **Purpose:** to collect data on the vegetation present along the stable south side of the CSS lump in the East Meadow in order to compare it to the data collected in spring of 2014 before the fire
- **Null hypothesis:**
 - The stable boundary of California Sage Scrub did not demonstrate a significant difference in vegetation growth after the Woolsey Fire.
- **Alternate hypothesis:**
 - There was a significant difference in vegetation growth or evidence of secondary succession occurring along the stable boundary of California Sage Scrub after the Woolsey Fire.

Common Species



Artemisia douglasiana



Pseudognaphalium canescens



Quercus berberidifolia



Data & Methods

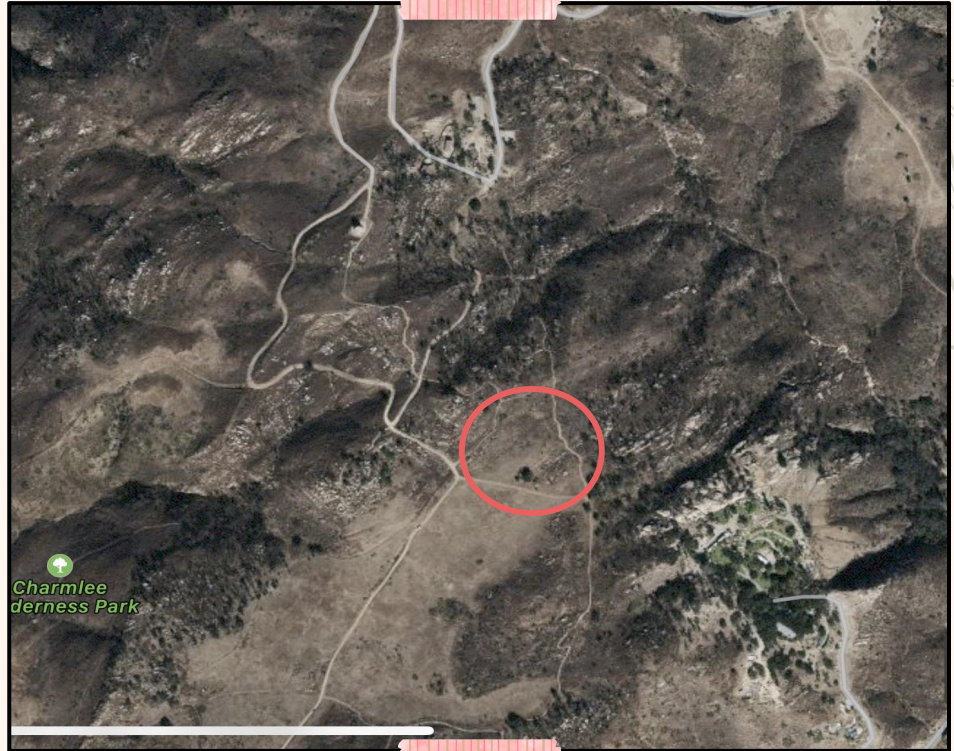
Collection



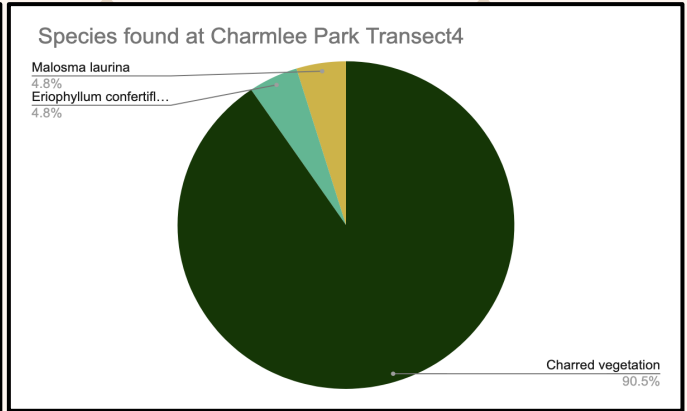
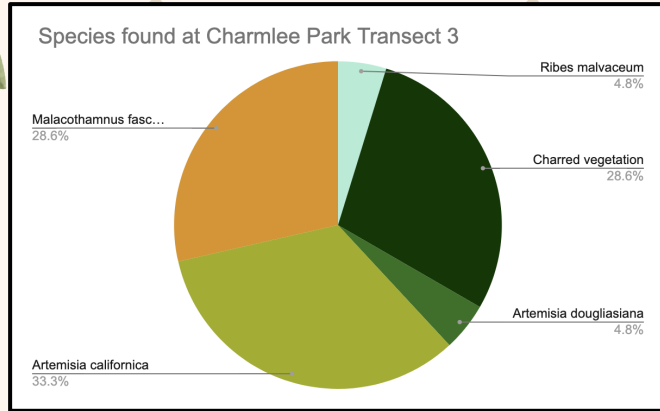
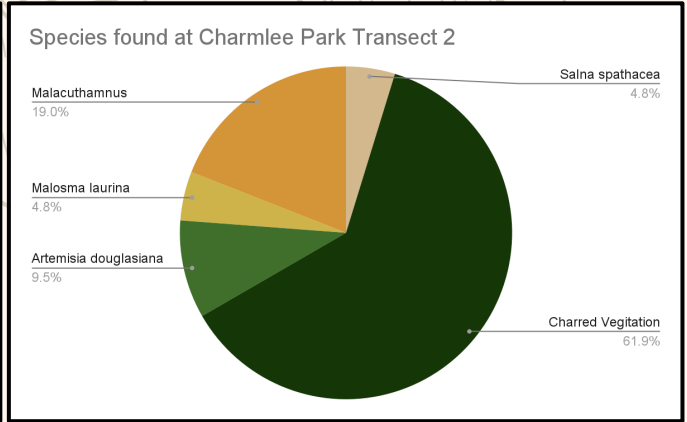
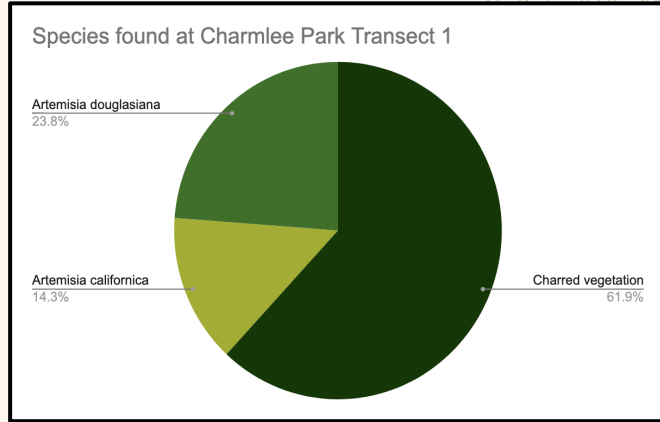
- 8 transects, 20 meters long
 - Instructions and coordinates provided by predecessors (along East Meadow Trail)
- Vegetation recorded at every meter
 - Identified in the corresponding form (no ash or bare ground, mostly charred vegetation that was difficult to identify)
- Side note: was fairly difficult to navigate since the trails were not marked and reception was spotty, heavy fog

Results

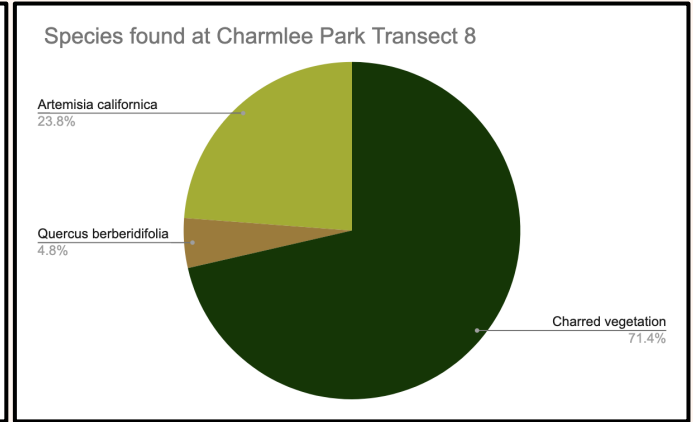
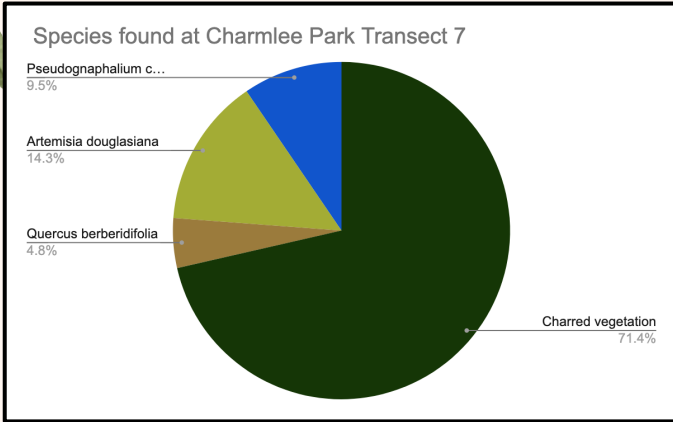
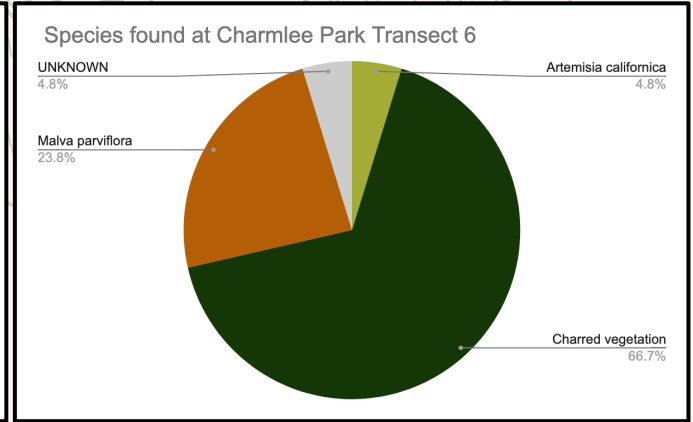
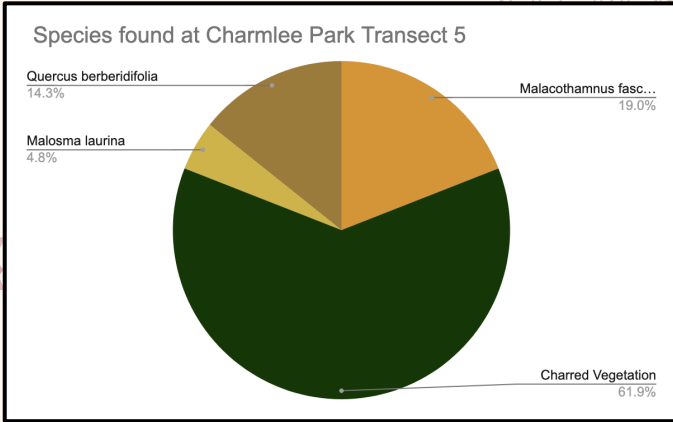
This is a Satellite image of the Charmlee Park California Sage Scrub (CSS) stable (alpha) boundary where eight transects were taken and data was recorded.



Transects 1-4



Transects 5-8



Chi Square Analysis

C	E	X^2
b	x	70
s	p	0
e	e	$.2$
C	C	2
r	t	2
e	e	9
i	d	c
d	d	a
$($	$($	i
C	E	c
$)$	$)$	c





Discussion

- **Significant differences in vegetation displayed after Woolsey fire**
- New fire-followers
- Returning shrubs
- Adaptations allow the CSS to restore itself
- Promising outlook for the future of this disturbed patch



Conclusion

- **Reject the null hypothesis**
 - There was a significant difference in the vegetation observed along the stable CSS boundary
 - Further data collection would be ideal to keep track of the growth of the current species and the potential growth of species that have yet to grow
- **Future Data Collection Tips**
 - Have back-up GPS units
 - Download or print out a map of trails
 - Prepare for sudden weather changes (chilly fog → direct sunlight)



Thanks!



References:

Westman, W.E. Diversity Relations and Succession in Californian Coastal Sage Scrub *Ecology, Ecological Society of America*, 62, 1.

O'Leary, J.F. Post-fire diversity patterns in two sub associations of Californian coastal sge scrub *Journal of Vegetation Science*, 1, 2.

Berger, Wolf. On "CHAPARRAL" versus "COASTAL SAGE SCRUB" in San Diego County *Scripps Institution of Oceanography Technical Support*.

