

Single Burn Controls Goatgrass[†] for at Least 7 Years

[†]Either *Aegilops triuncialis* or *A. neglecta*

Based on *Invasive Plant Science & Management* 8(3): 317-322

Jaymee T. Marty¹, Sara B. Sweet², and Jennifer J. Buck³

¹Marty Ecological Consulting

²The Nature Conservancy

³California Native Plant Society

Introduction

- Few tools exist for landscape-scale rangeland management
- Prescribed burning potentially good, but labor & liability high
- If the effort is invested, how many years of control can one burn provide for goatgrass?
- DiTomaso et al. (2001) found two burns in consecutive years are necessary for any control
- Does the burn also provide long-term benefits for native plants?

Methods

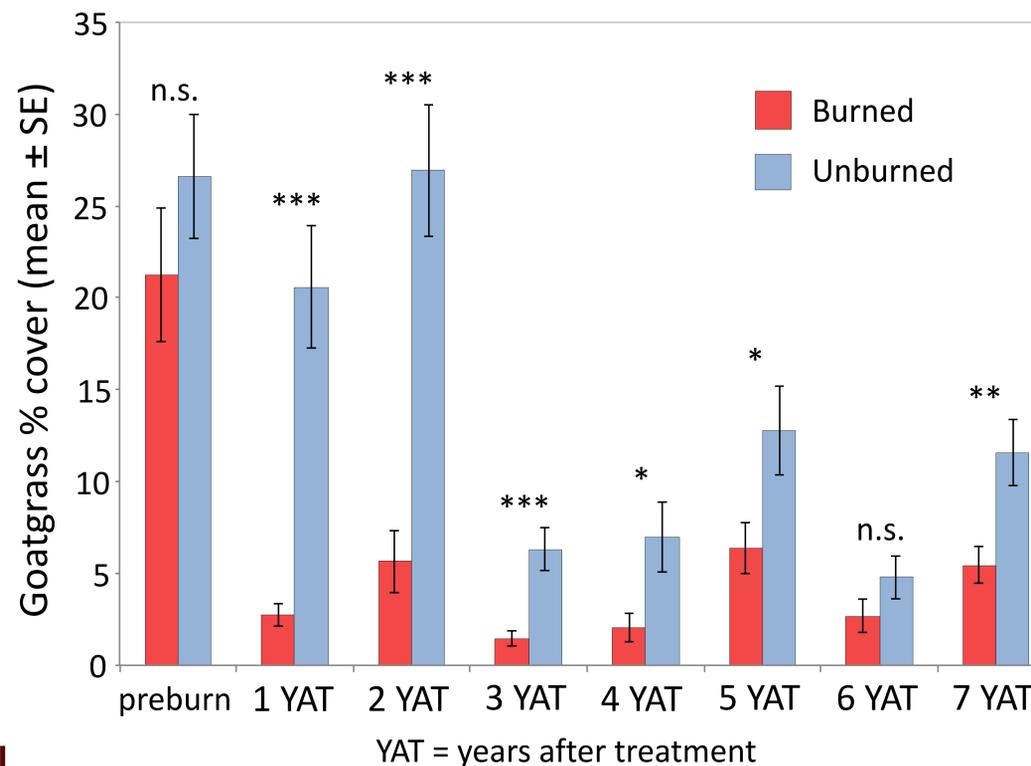
- Site: vernal pool grassland in southeast Sacramento County
- 500 ac burned early June 2005



- 4 blocks split into burned or unburned
- Blocks sampled by quadrat & belt transect
- Percent cover of all vascular plants recorded immediately pre-burn and each June for next 7 years



Results

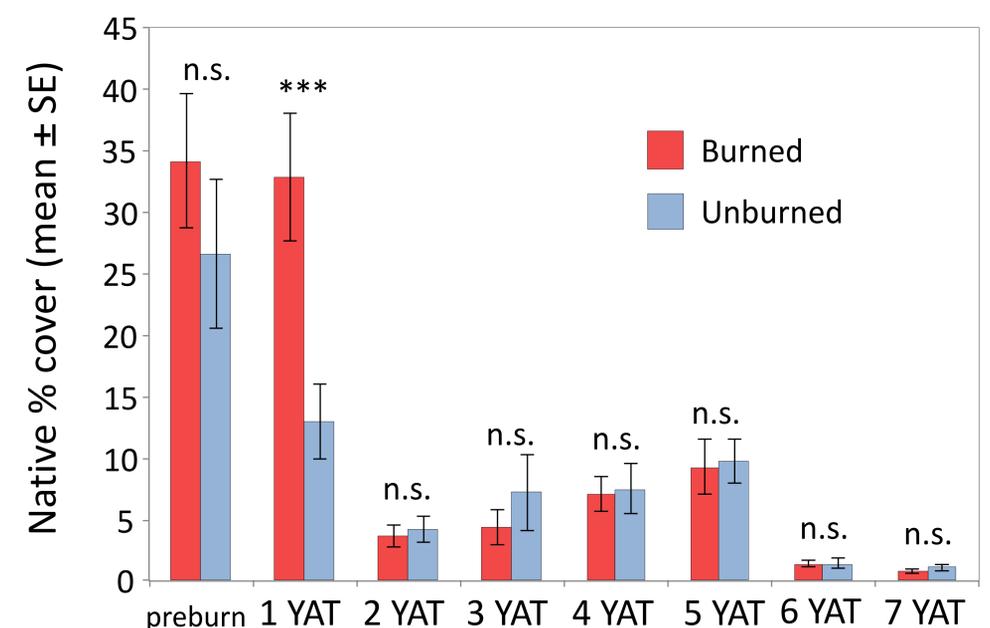


Effect on Goatgrass

- Single burn strongly reduced goatgrass cover for first 2 YAT
- Reduction maintained through 7 YAT
- Not statistically significant in year 6

Effect on Natives

- Native plant cover higher in burned plots for only 1 YAT
- Also saw flush of filaree 1 YAT



Conclusions

- The single burn yielded long-term benefits for cattle forage production, but only one year of conservation benefit (native plant cover).
- The burn at this site affected goatgrass differently than similar burns at other sites, also intended to target goatgrass.
- We speculate the high efficacy of this burn may be due in part to the amount of dry fuel present, which was high due to high spring rainfall.