### Fire Effects on Deer in Longleaf Pine Forest

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### Acknowledgments





# What We "Knew" Already

- Fire increases forage quantity for several years
- Fire increases forage quality
  - Increase in crude protein and phosphorus
  - Benefits last <1 year</li>
- Fire  $\downarrow$  and then  $\uparrow$  fruit production
- Deer follow fire, but anecdotally
- No studies in longleaf pine communities

#### Lashley et al. 2014 PLoS ONE

### Soft Mast

Lashley et al. In press Fire Ecology



**Return interval experiment** 

Lashley et al. In review Ecosphere







Lashley et al. 2014 Ecological Indicators















#### Fire season experiment

Lashley et al. In review Journal of Ecology











2011 Core Area

### 2012 Core Area

0.5

0 0.125 0.25

0.75

Kilometers

#### 2011-08-10 08:46:38 M

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#### Lashley et al. 2014 PLoS ONE

### **Feeding Rate**

Lashley et al. In Review Ecology and Evolution





Cover

% Visual Obstruction Unburned **Drainages** Years-since-fire

Lashley et al. In Review Ecology and Evolution

## Conclusions

- Variability in season and return interval is important to benefit a wide array of species
- Fire mosaic ensures cover and fruit available
  Fire shadows allow persistence of less pyrophytic flora
- Annual and biennial burns negative for deer
- Interesting interaction between fire effects and predation risk on deer habitat use

# Questions

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