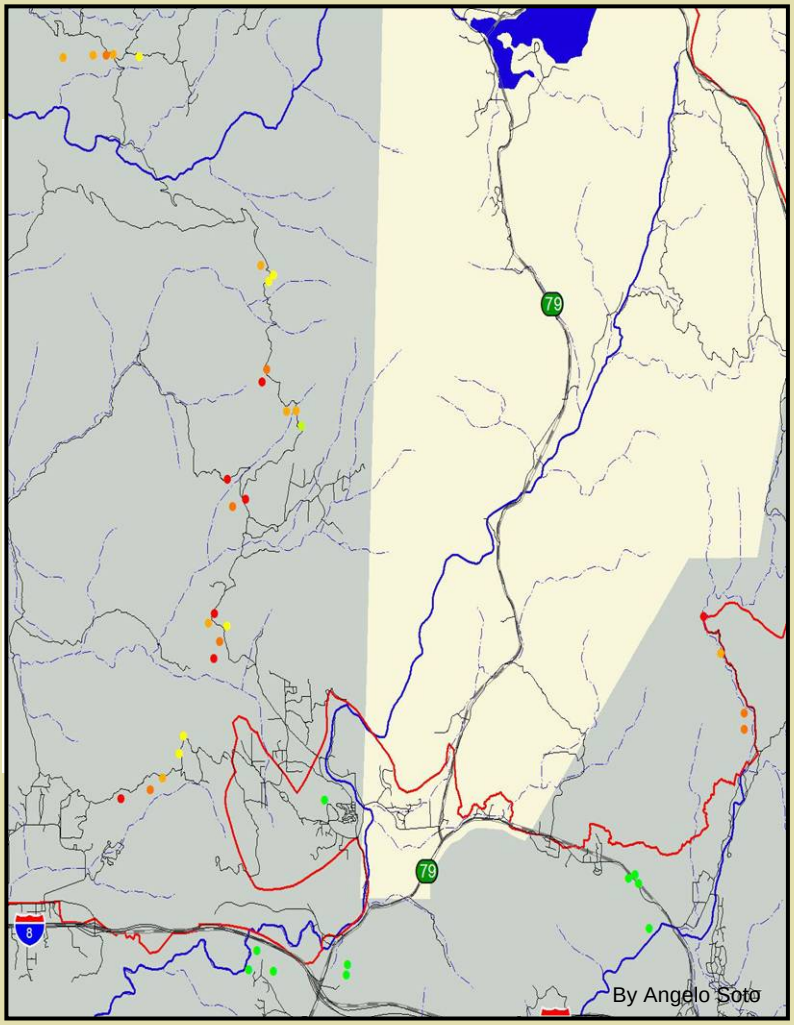
Small Mammal Study Design

- Site: Cedar Fire burn area (chaparral)
- 30 burned, 10 unburned
- Burned plots vary with distance to unburned edge and burn severity
- 2, 15 trap transects, trapped 2x/year.



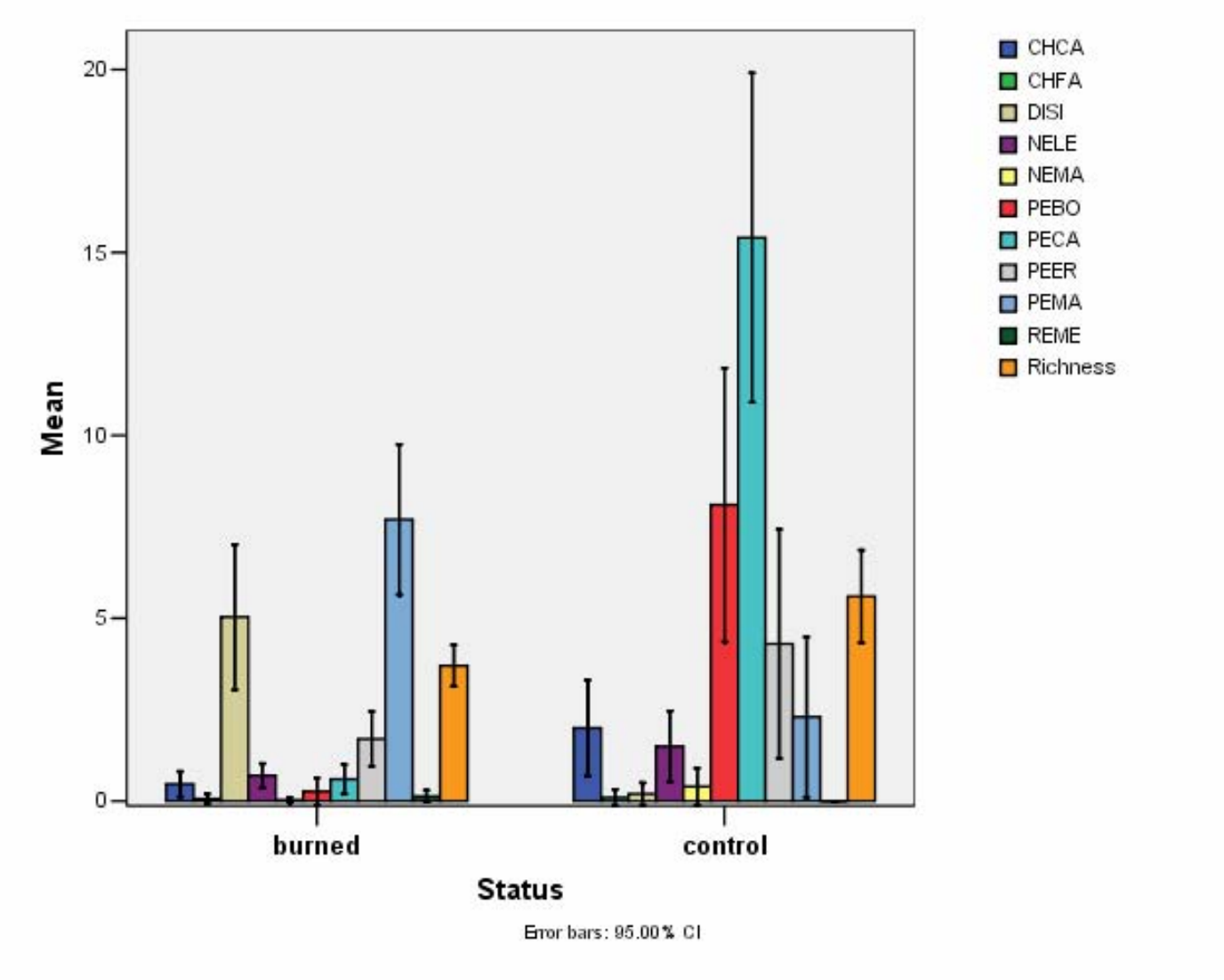
Preliminary Results Rodents

- Does mean # of individuals vary across burned vs unburned plots?

	Trapping Session		
Species	**Dec, 2004**	**May, 2005**	**Nov, 2005**
CHCA		0.028	
CHFA	0.001		
DISI	>0.001	>0.001	>0.001
NELE	0.021	0.036	
NEMA		0.134	0.032
PEBO	0.005	0.001	0.001
PECA	>0.001	>0.001	>0.001
PEER		0.098	
PEMA	>0.001	0.006	>0.001
REME	0.043	0.103	
Richness		0.002	0.016

Higher on control plots **Higher on burned plots**

Preliminary Results Rodents



Preliminary Results Rodents

- Burn intensity
  - No impacts of intensity on abundance for any species.
- So, burning has large effects, but burn intensity apparently has few.
  - BUT, we have not yet looked at interactions between burn intensity, vegetation, and small mammals

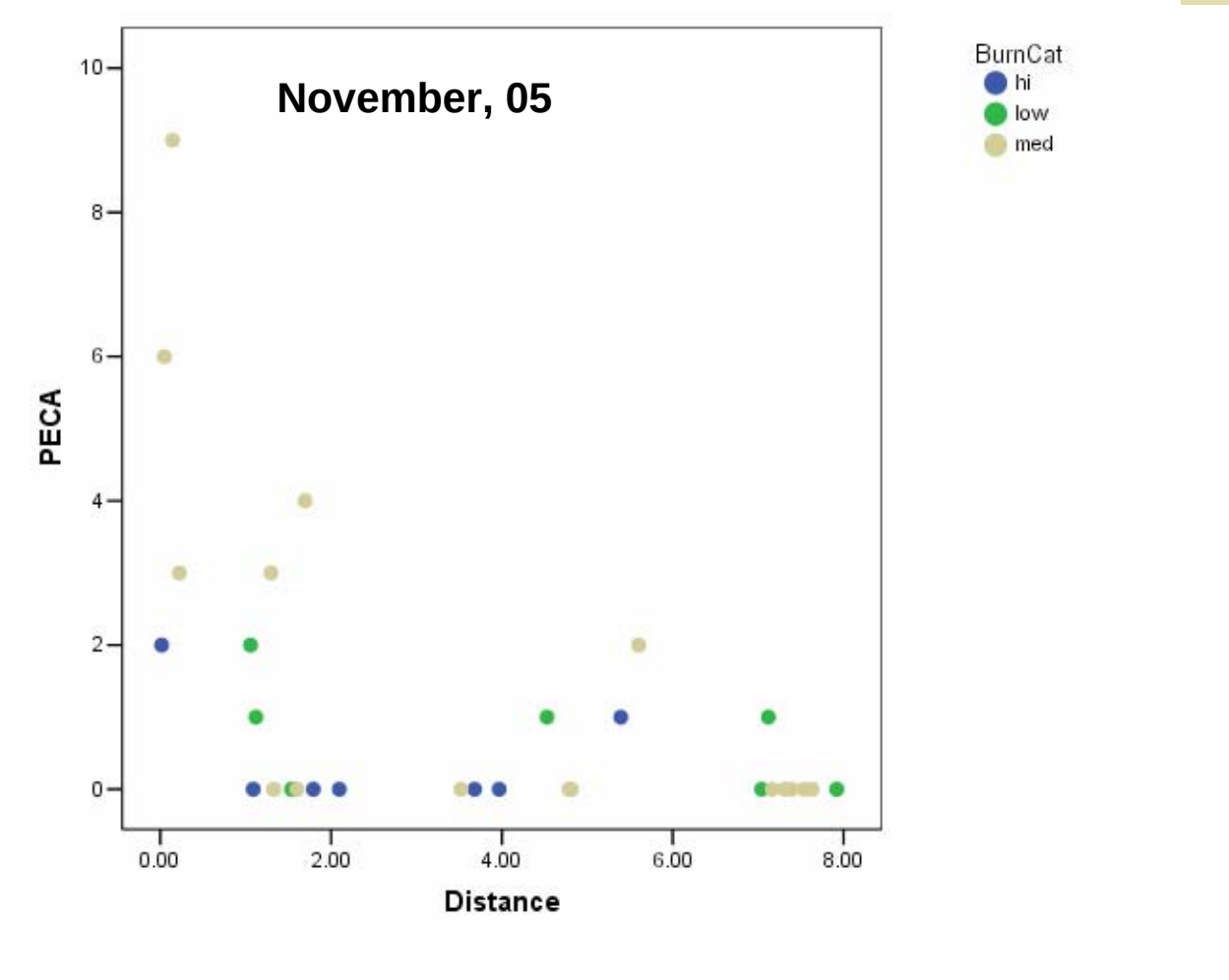
Preliminary Results Rodents

- Is there a correlation between number of animals captured and distance to unburned edge?

	Trapping Session		
Species	**Dec, 2004**	**May, 2005**	**Nov, 2005**
CHCA	**-0.409**	**-0.326**	
CHFA			
DISI			**0.445**
NELE			
NEMA			
PEBO		**-0.362**	
PECA		**-0.429**	**-0.504**
PEER		**-0.363**	
PEMA			
REME	**-0.414**		
Richness	**-0.438**	**-0.341**	

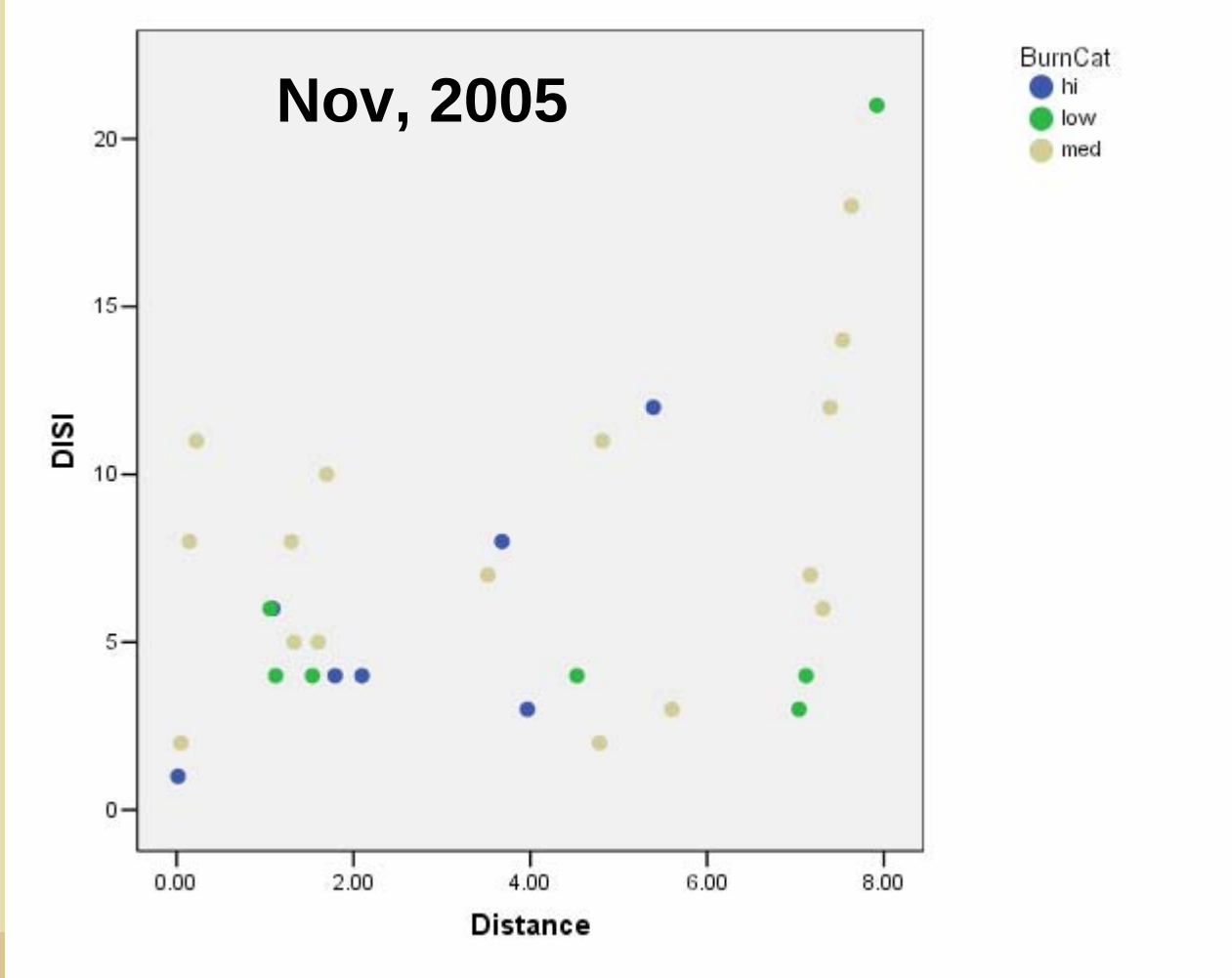
Preliminary Results Rodents

- Distance effects can take time to develop



Preliminary Results Rodents

- In Kangaroo rats, abundance near edge remain constant, while interiors increase through time



Preliminary Results Rodents

- Distance effects present in some species
  - May be transitory
  - May have multiple causes
    - California Mice: Population growth and dispersal?
    - Kangaroo Rats: Increased predators along edges?
- Future analyses
  - Site specific covariates such as vegetation, soil, distance to water, etc.
  - More complex, synthetic statistical models