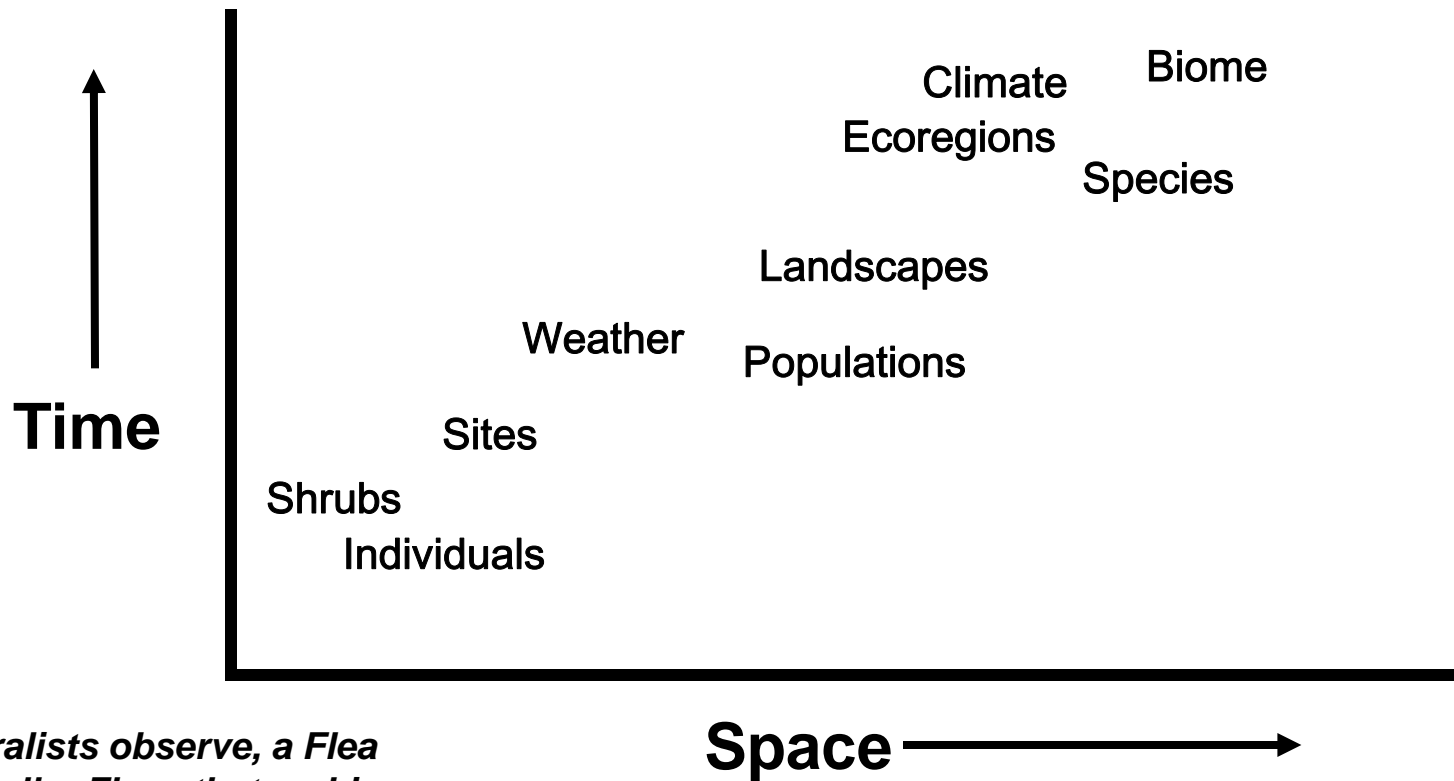


Conclusions

- **Treatment and control differ in bird community structure and trajectory**
- **Short-term response to treatment may be primarily a function of habitat loss**
- **Habitat improvements for sagebrush obligates may be long-term**
- **Regional dynamics also are important**

Hierarchical Organization



*So, Nat'ralists observe, a Flea
Hath smaller Fleas that on him prey,
And these have smaller Fleas to bit 'em,
And so proceed ad infinitum.*

Jonathan Swift 1733

Short-term effects of management treatments on bird communities in pinyon-juniper woodlands

**Steve Knick and Steve Hanser
USGS**

**Matthias Leu
College of William and Mary**

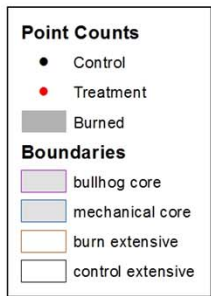
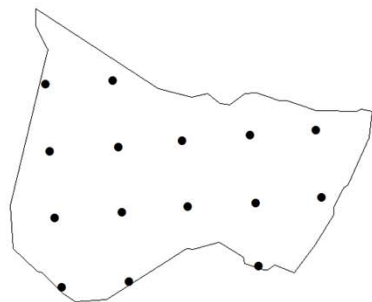
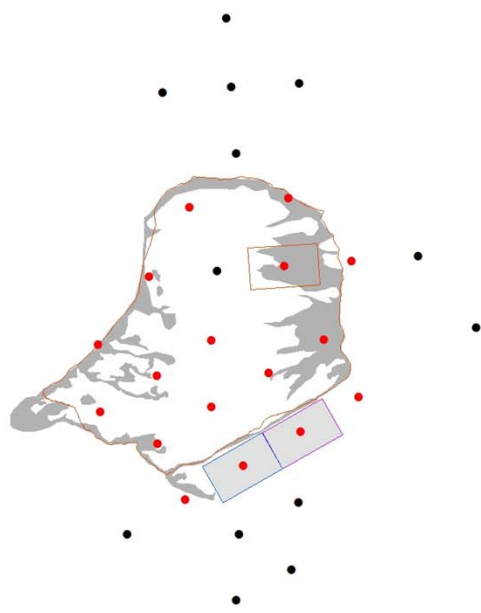
Objectives

- **Delineate the organization of bird communities**
- **Identify the environmental gradients underlying bird communities**
- **Use changes in bird community to interpret the effects of management treatment**

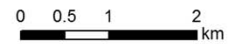
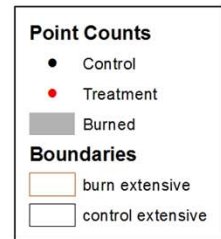
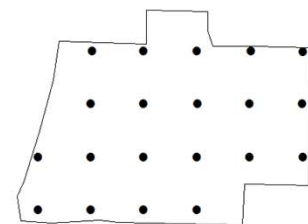
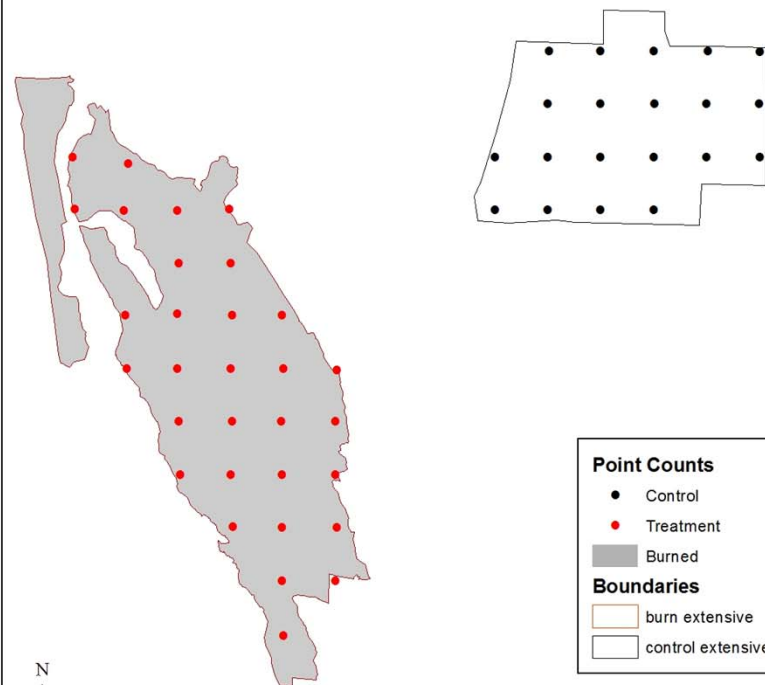
Study Design

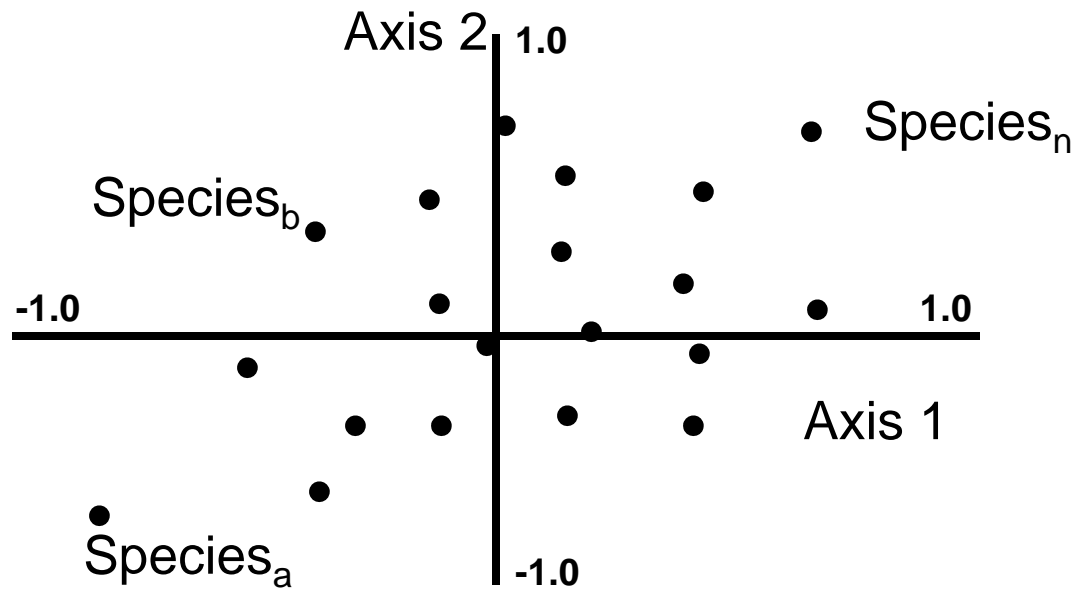
- **Two study sites (Onaqui, Five Creeks)**
 - Treatment
 - Control
- **Breeding bird point transects**
- **Vegetation plots**
- **Ordinations (CCA)**

Onaqui

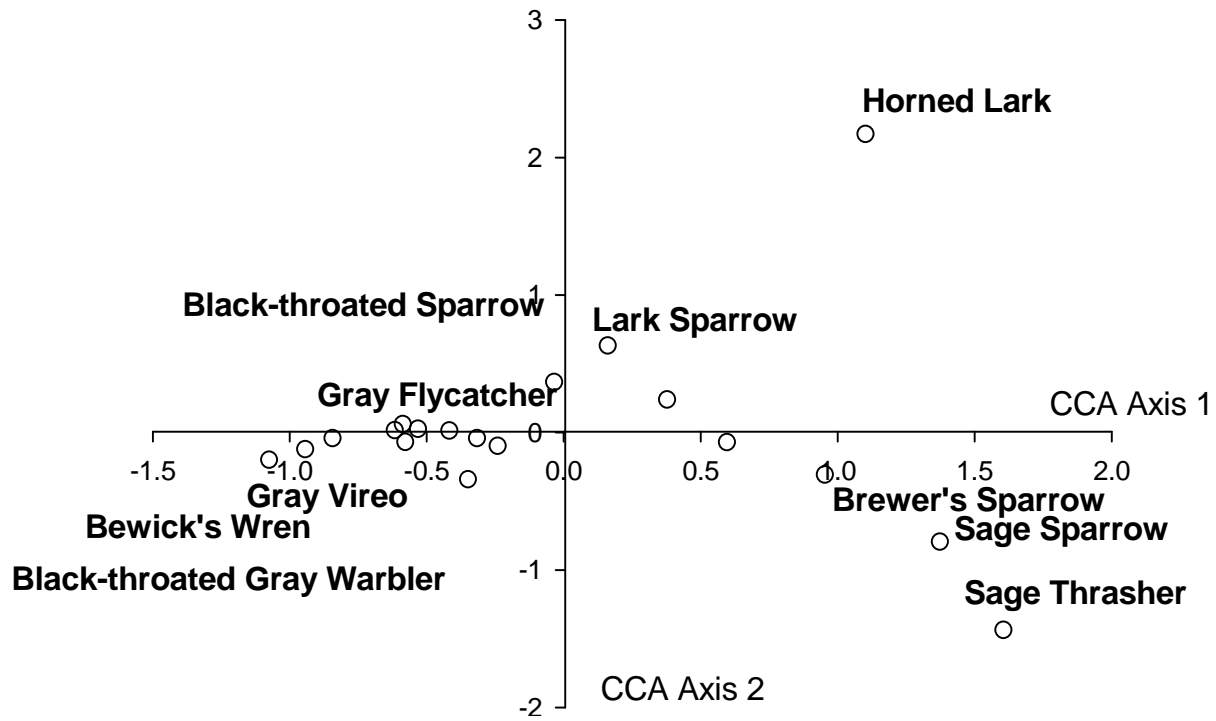


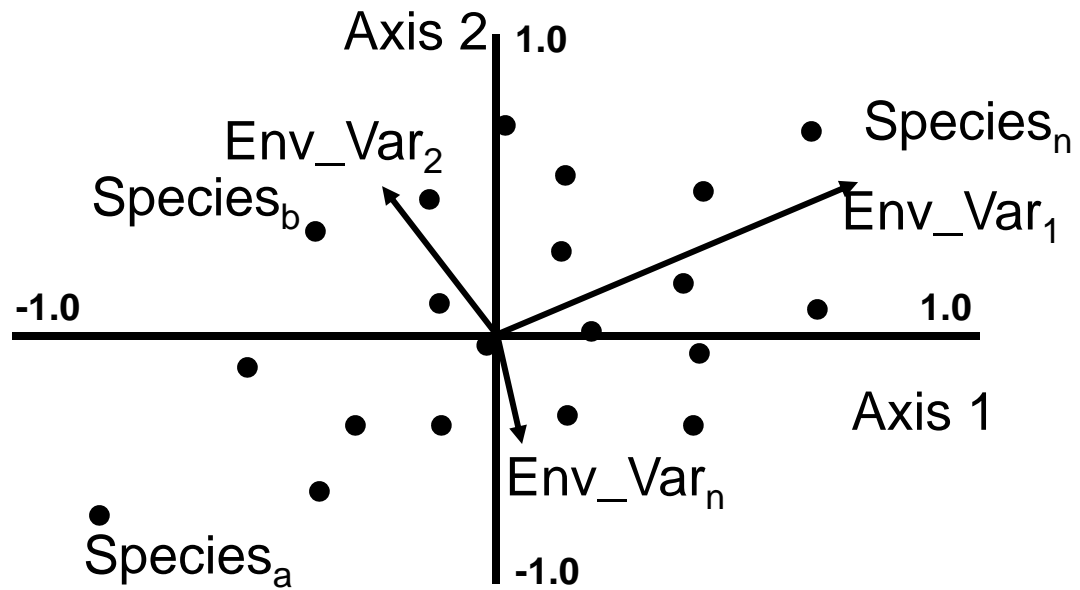
Five Creeks



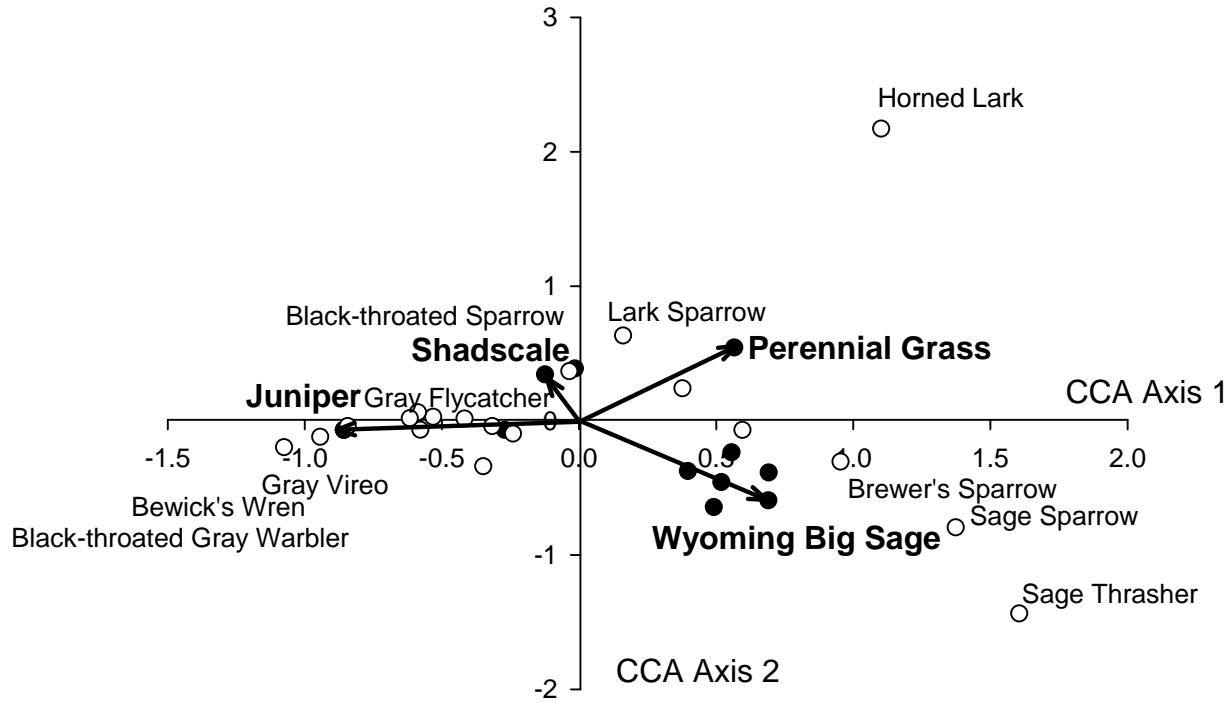


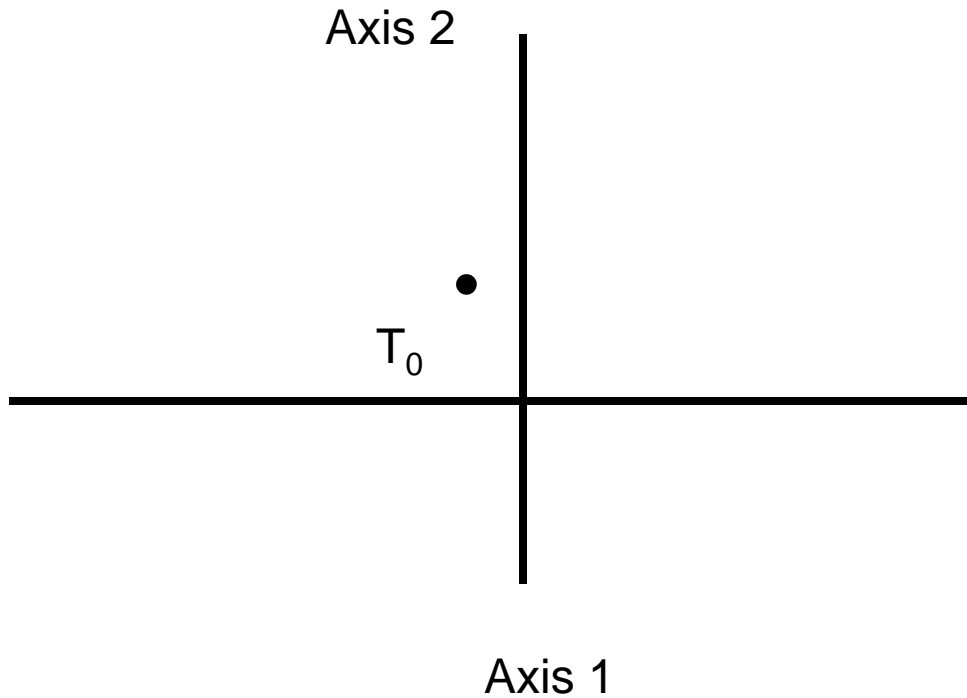
Onaqui

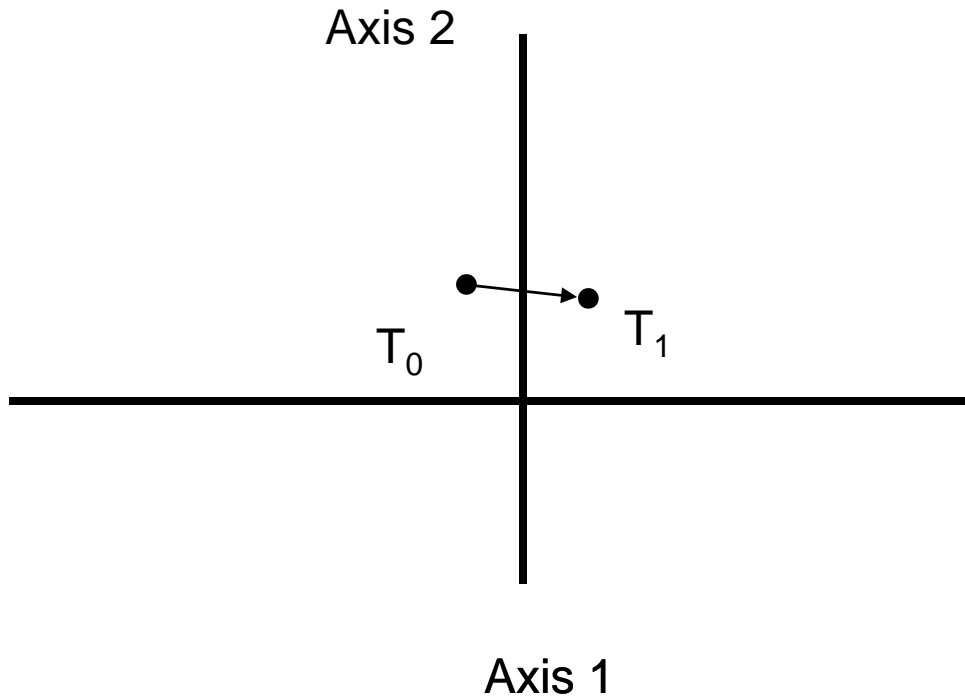


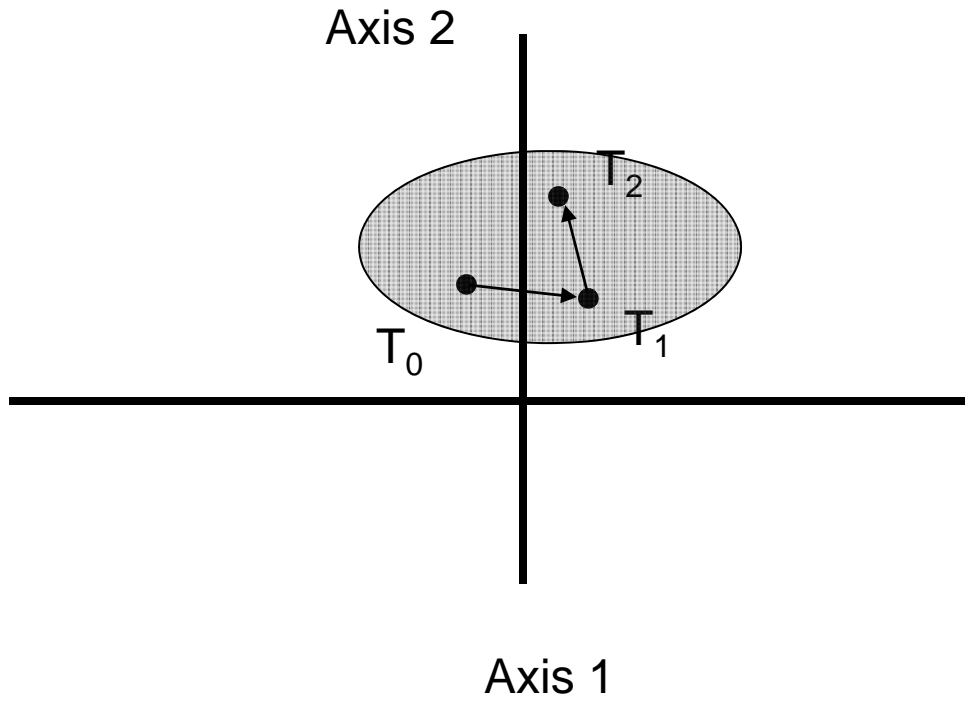


Onaqui

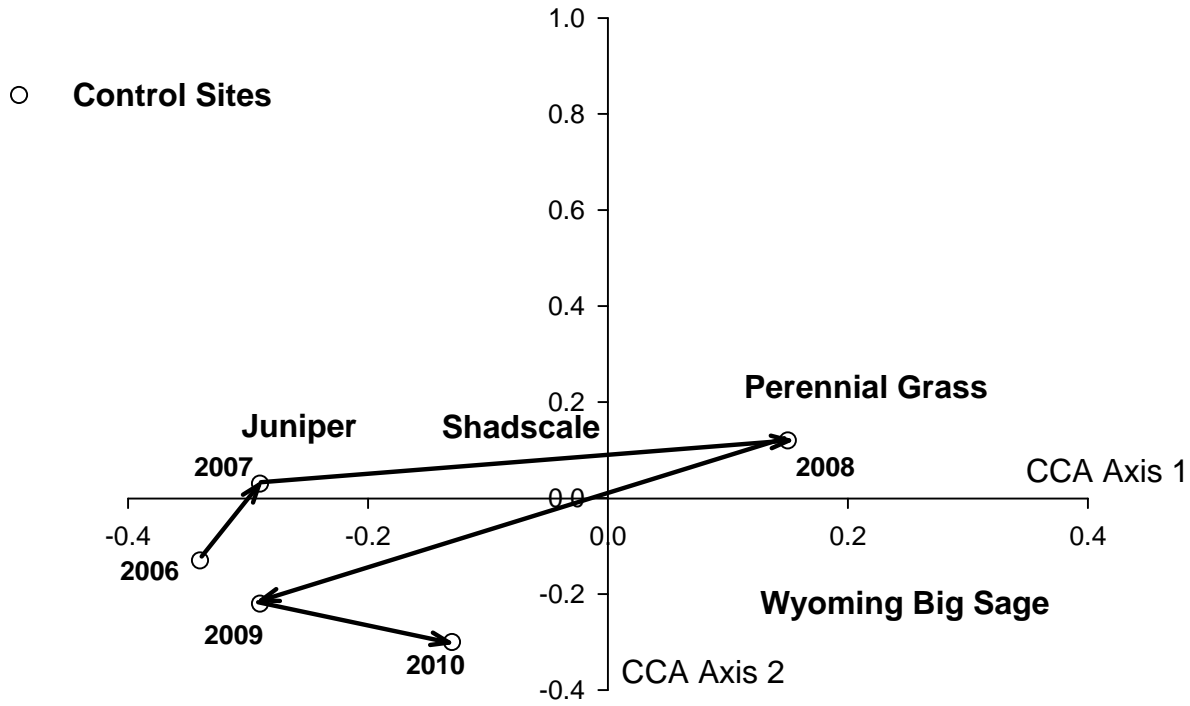


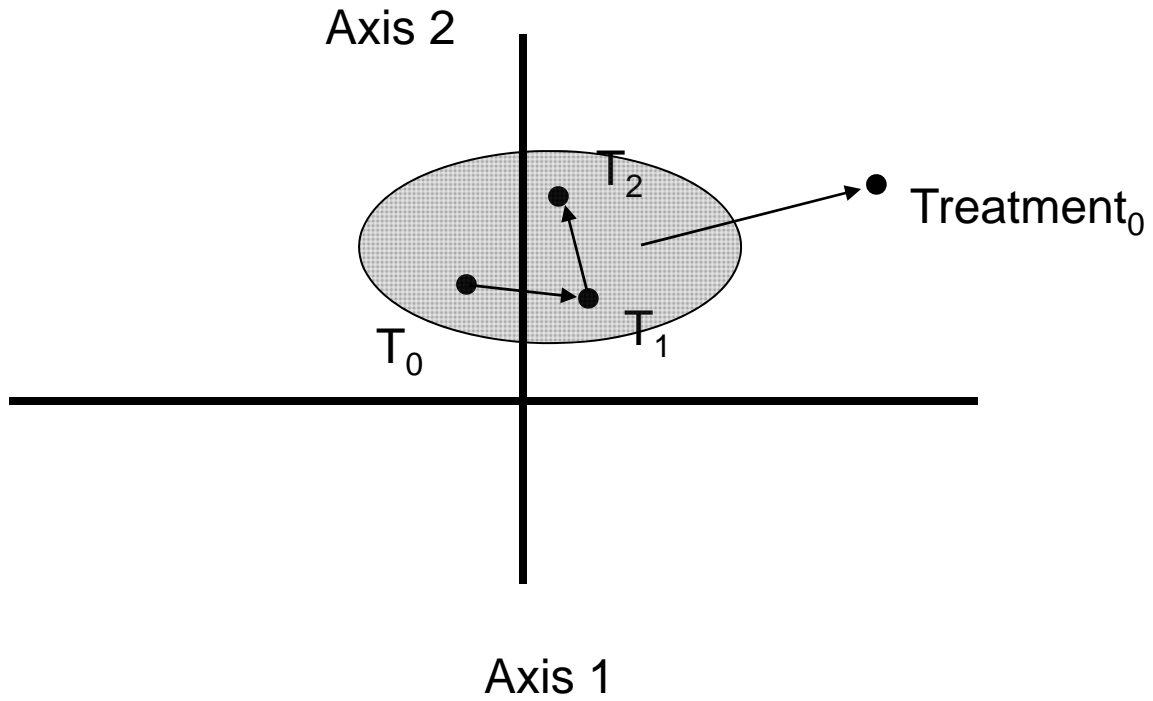


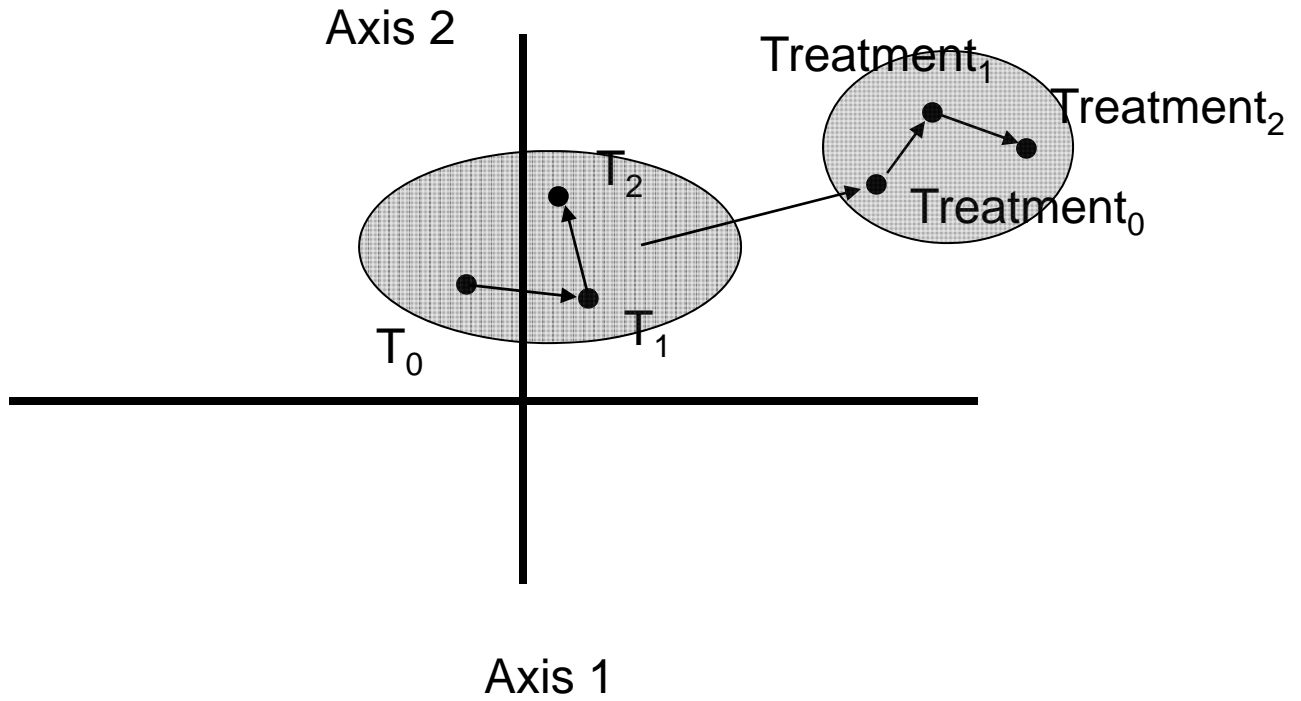




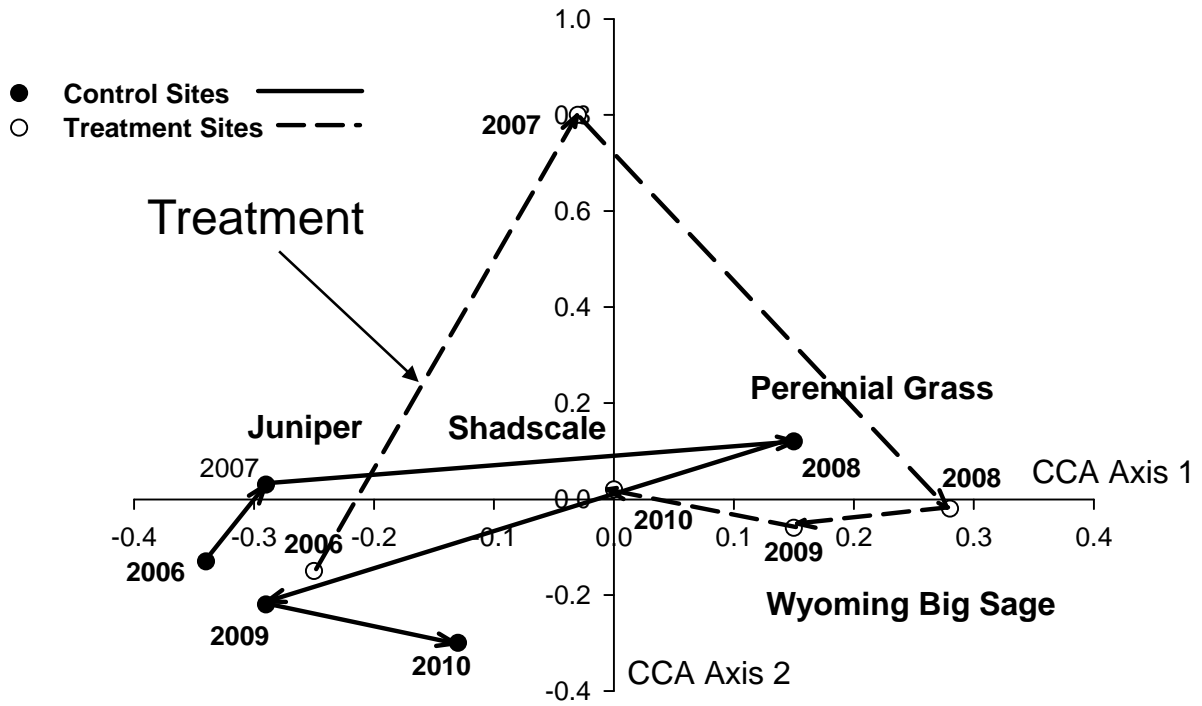
Onaqui



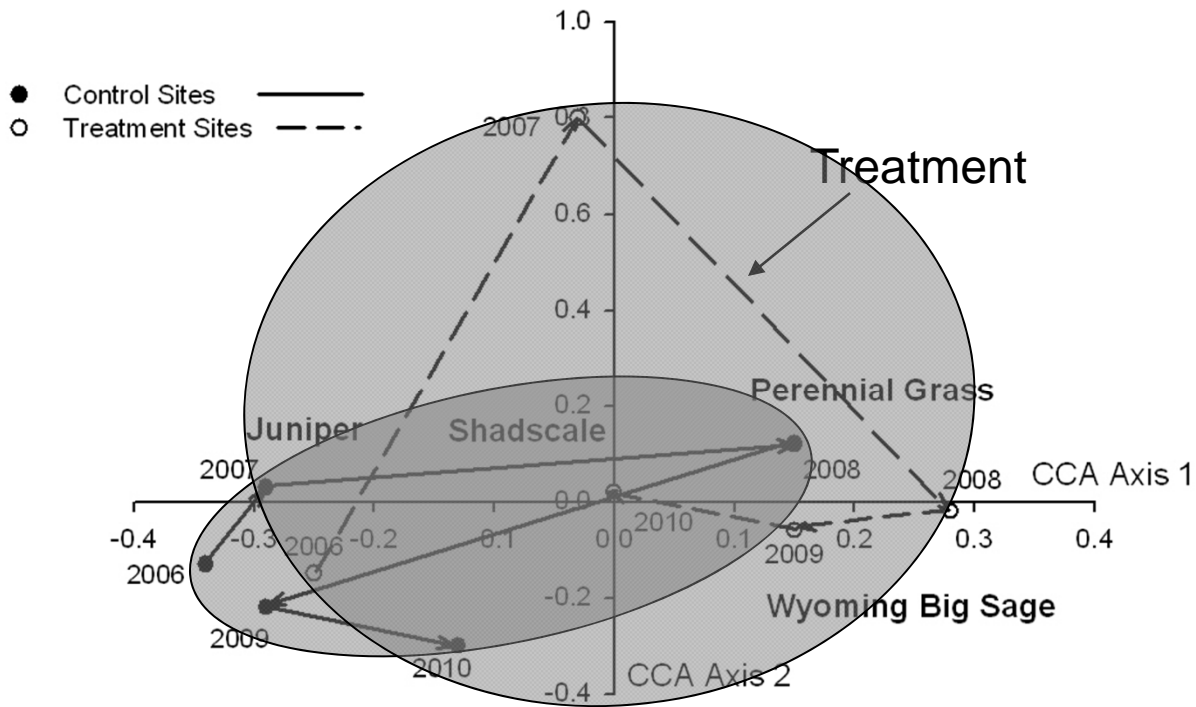




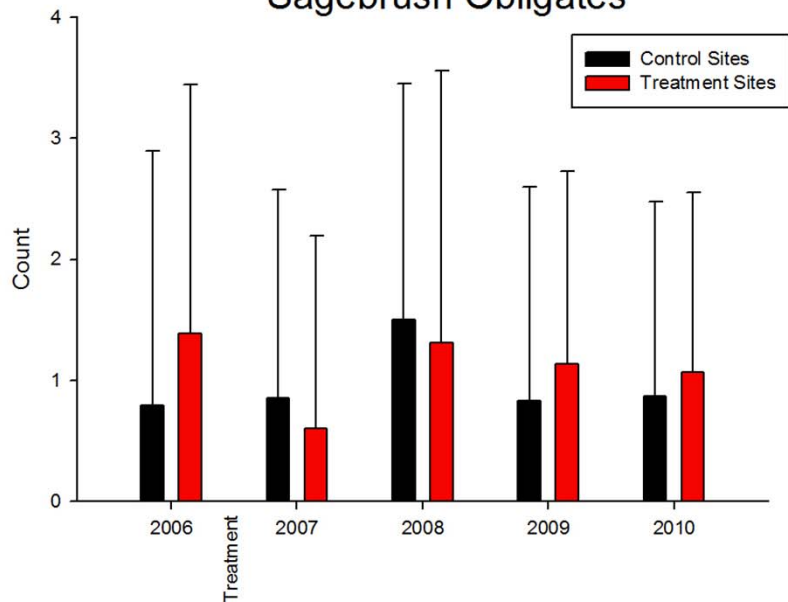
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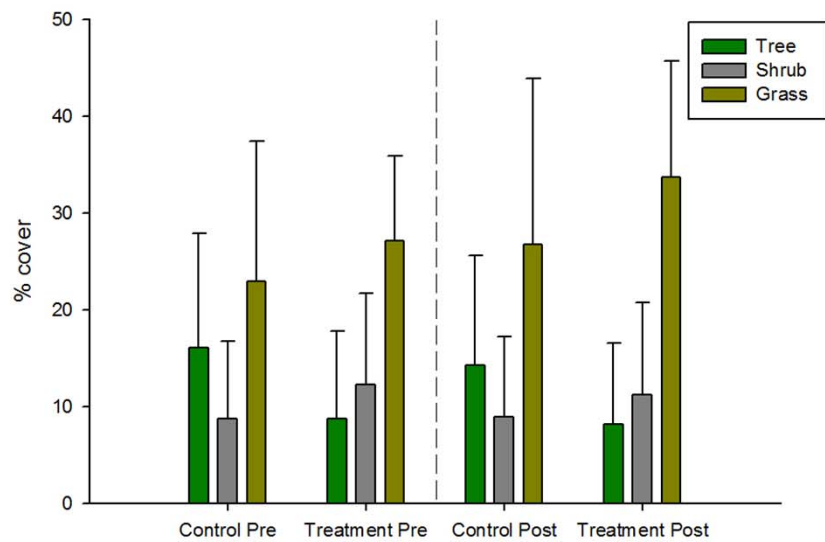
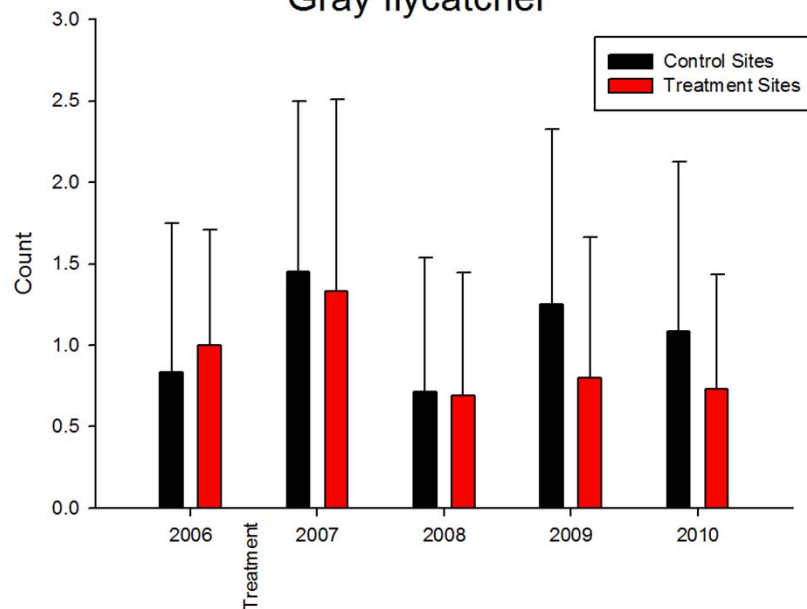
Onaqui



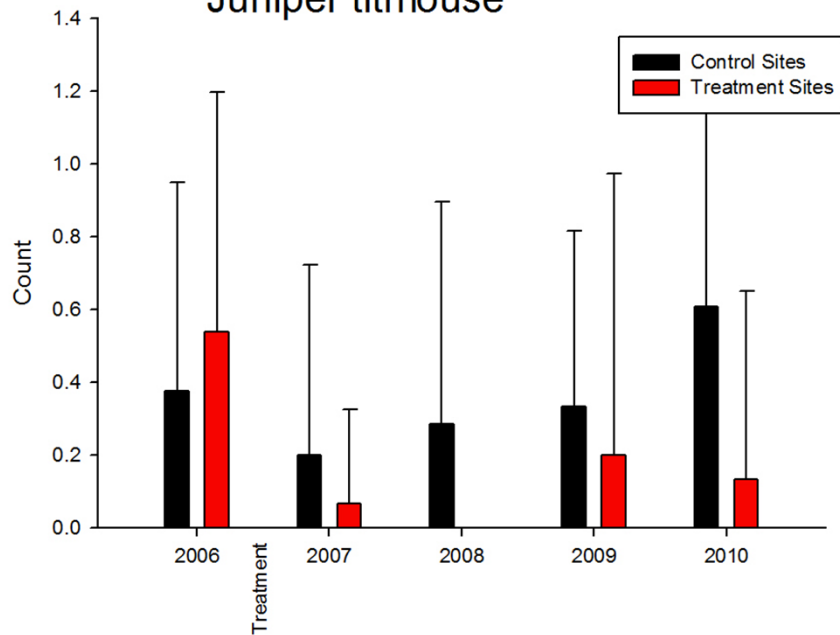
Sagebrush Obligates



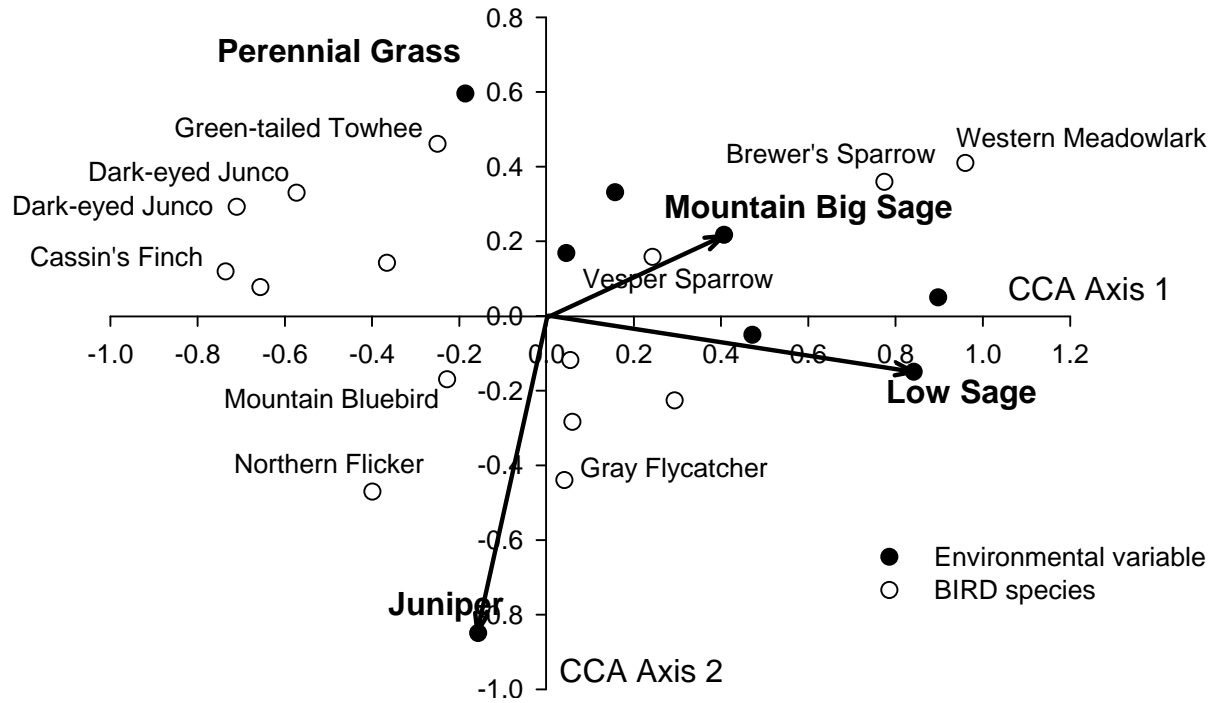
Gray flycatcher



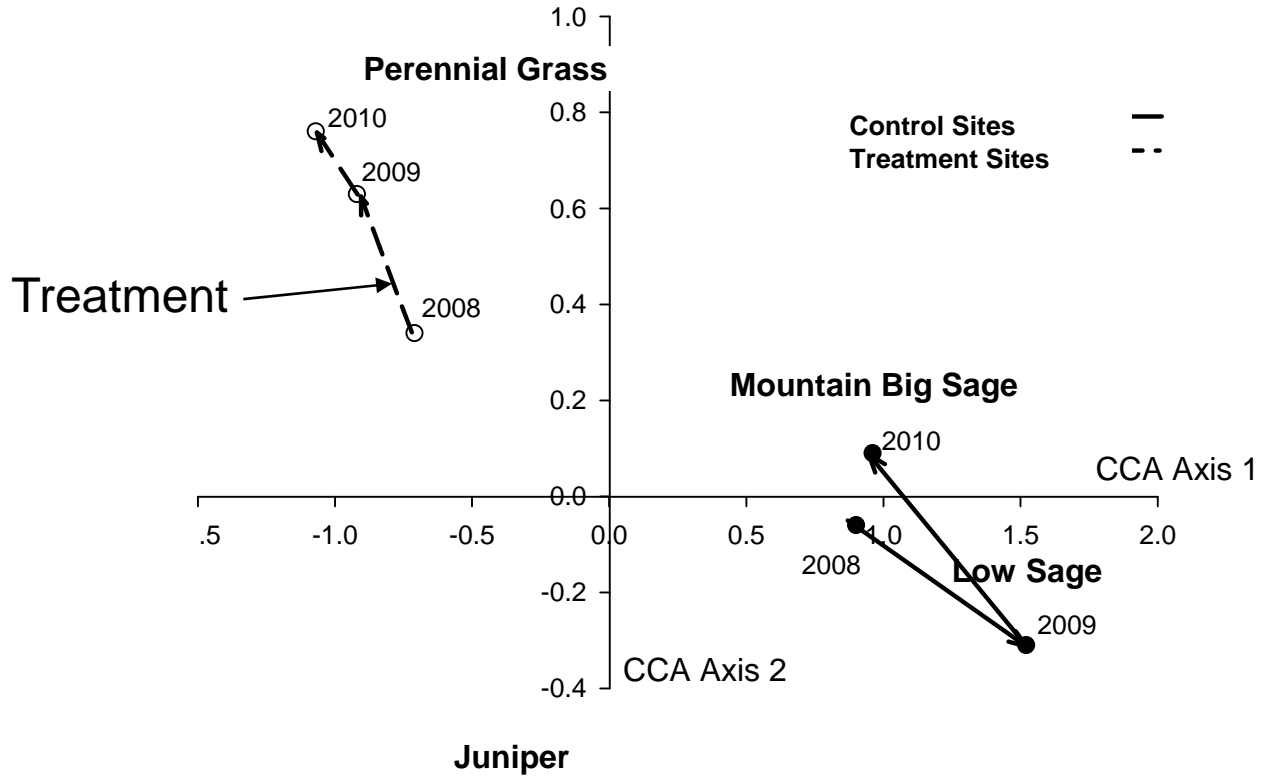
Juniper titmouse



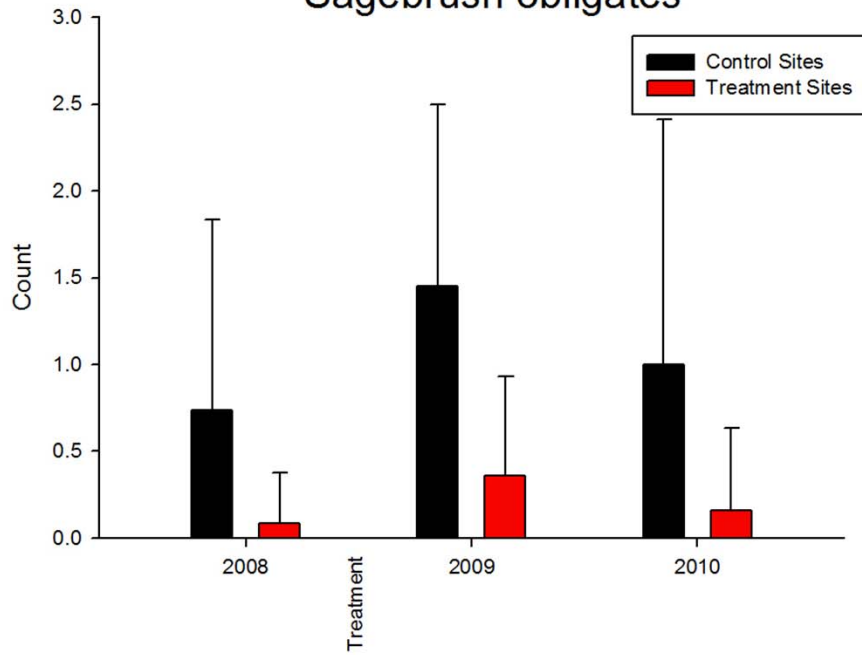
Five Creeks



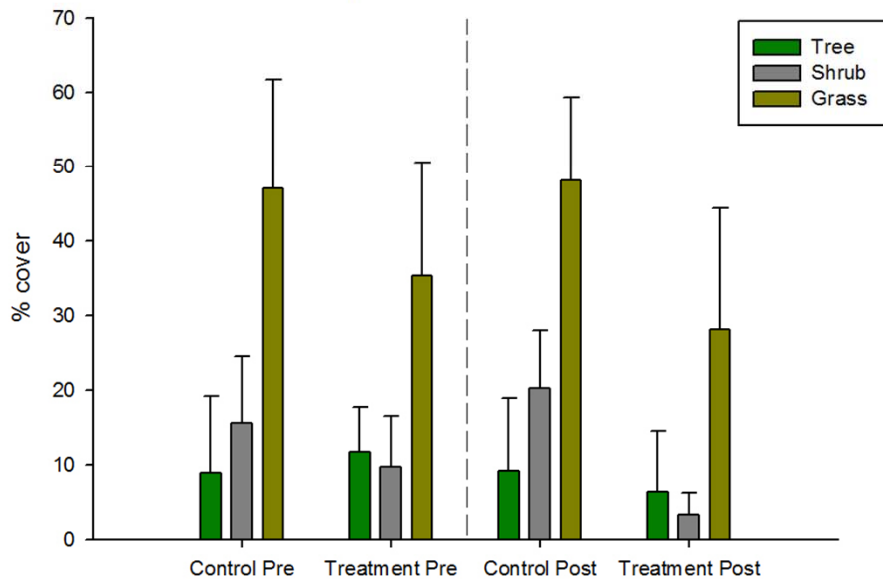
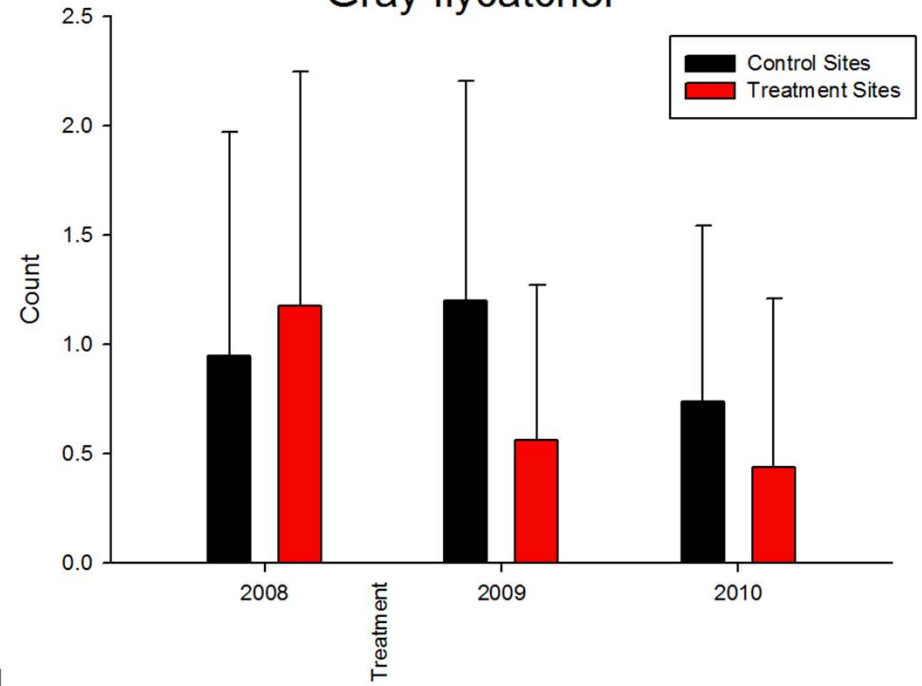
Five Creeks



Sagebrush obligates

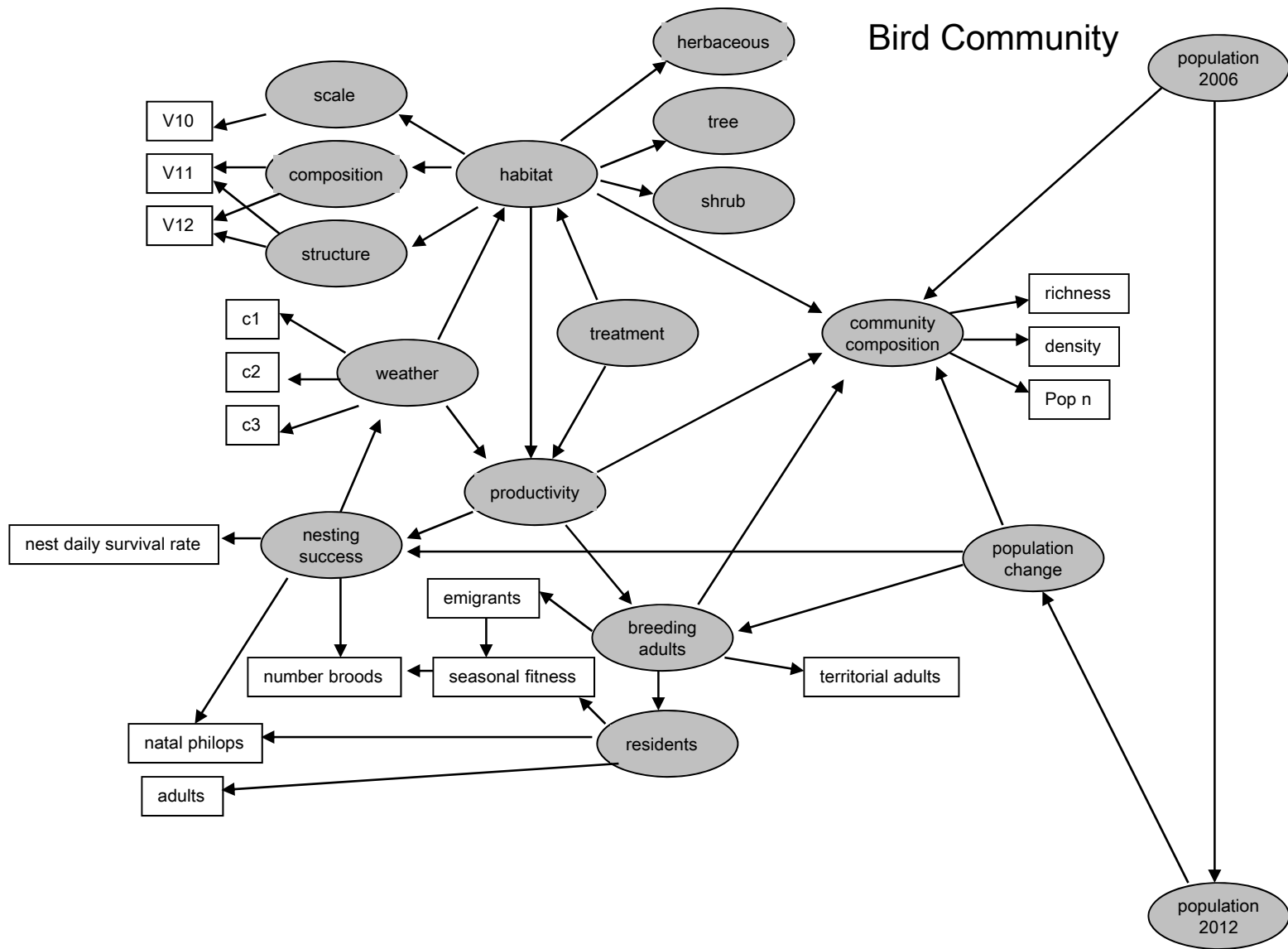


Gray flycatcher

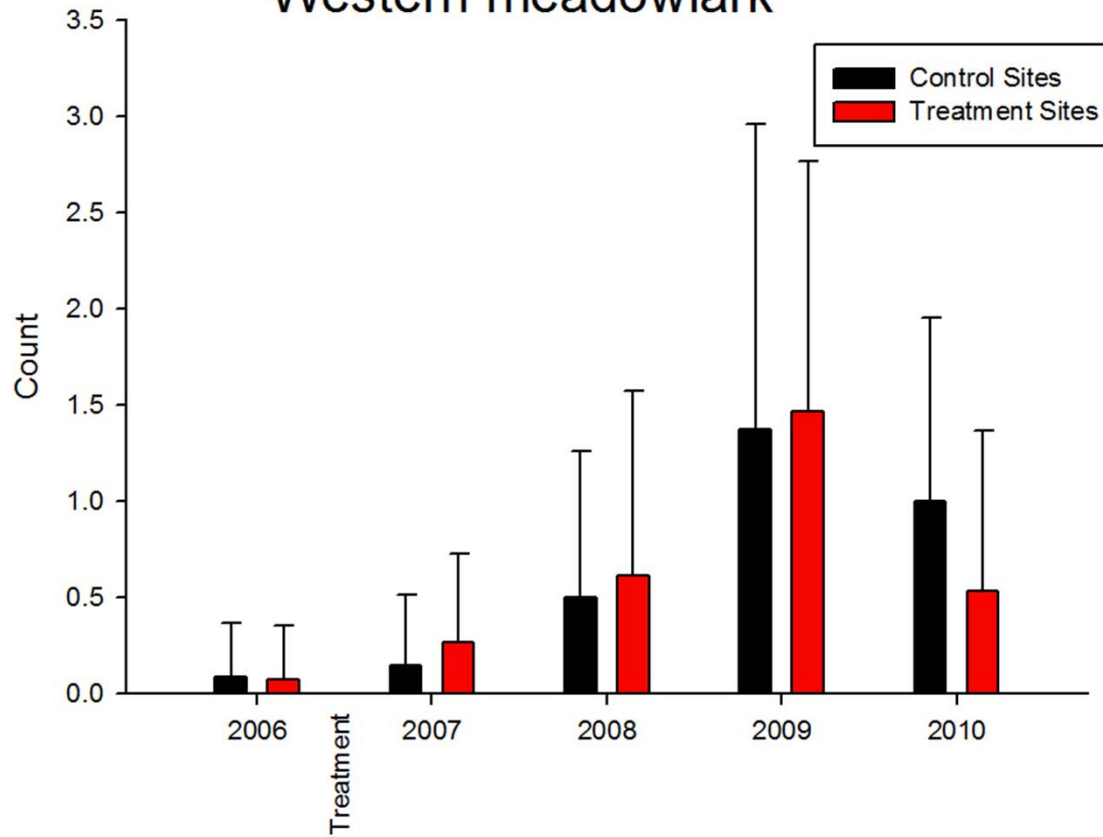


Conclusions

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Western meadowlark



Conclusions

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