The Potential for a Predator-Prey Interaction; A Case Study on Thunder Basin and Pawnee National Grasslands.

Tyler Michels¹, Ryan Parker¹, Allison Pierce¹, Courtney Duchardt², Angela Dwyer³, Michael B. Wunder¹

¹University of Colorado Denver
²University of Wyoming
³Bird Conservancy of the Rockies
### Conservation

#### Single-species → Multi-species Management

<table>
<thead>
<tr>
<th>Species</th>
<th>USFS Region 2</th>
<th>WYGF</th>
<th>CPW</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Swift Fox</em></td>
<td>Sensitive Species</td>
<td>Tier II</td>
<td>SSC/Tier II</td>
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<td>ST/Tier I</td>
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Large-Scale Mountain Plover Study
• Species of Focus
• Grassland Overview
  • Thunder Basin
  • Pawnee
• Trend Data/Patterns
  • Species Interaction?
• What Next?
Swift Fox (*Vulpes velox*)

Small Fox of the Great Plains

Threatened by Habitat Loss
Burrowing Owl (Athene cunicularia)

Small Migrating Owl

- Pre-Excavated Burrows
- Black-tailed Prairie Dog Colonies

Threatened by Habitat Loss

FactZoo

Mendoza, 2013
Mountain Plover (*Charadrius montanus*)

Migrating Shorebird

Short-Grass/Bare-Ground Habitat Requirement

Disturbance
• Species of Focus
• Grassland Overview
  • Thunder Basin
  • Pawnee
• Trend Data/Patterns
  • Species Interactions?
• What Next?
On Thunder Basin National Grassland...

Black-tailed Prairie Dog
(*Cynomys ludovicianus*)
On Pawnee National Grassland...
Colony fluctuation caused by sylvatic plague outbreaks
Colony fluctuation caused by sylvatic plague outbreaks
• Species of Focus
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Predator-Prey Relationships

Intraguild Predation?

Mesopredator Release?

Trophic Interaction?

Colony Size? Other Factors?
• Species of Focus
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• Trend Data/Patterns
  • Species Interaction?
• What Next?
Multi-Species Occupancy

Survey Colonies ≥3 Times → Models to Identify Relationships
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