

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

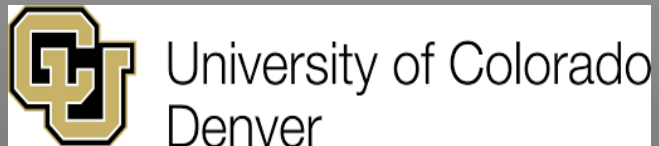


Tyler Michels¹, Ryan Parker¹, Allison Pierce¹, Courtney Duchardt², Angela Dwyer³, Michael B. Wunder¹

¹University of Colorado Denver

²University of Wyoming

³Bird Conservancy of the Rockies



Significance?

Conservation

Single-species → Multi-species
Management

	USFS Region 2	WYGF	CPW
<i>Swift Fox</i>	Sensitive Species	Tier II	SSC/Tier II
<i>Burrowing Owl</i>	Sensitive Species	Tier I	ST/Tier I
<i>Mountain Plover</i>	Sensitive Species	Tier I	SSC/Tier I
<i>Black-tailed Prairie Dog</i>	Sensitive Species	Tier II	SSC/Tier II

Large-Scale Mountain Plover Study

- Species of Focus
- Grassland Overview
 - Thunder Basin
 - Pawnee
- Trend Data/Patterns
 - Species Interaction?
- What Next?



USFS



USFS



Specht-Ponto

Swift Fox (*Vulpes velox*)



USFS

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*)



NWF

Migrating Shorebird

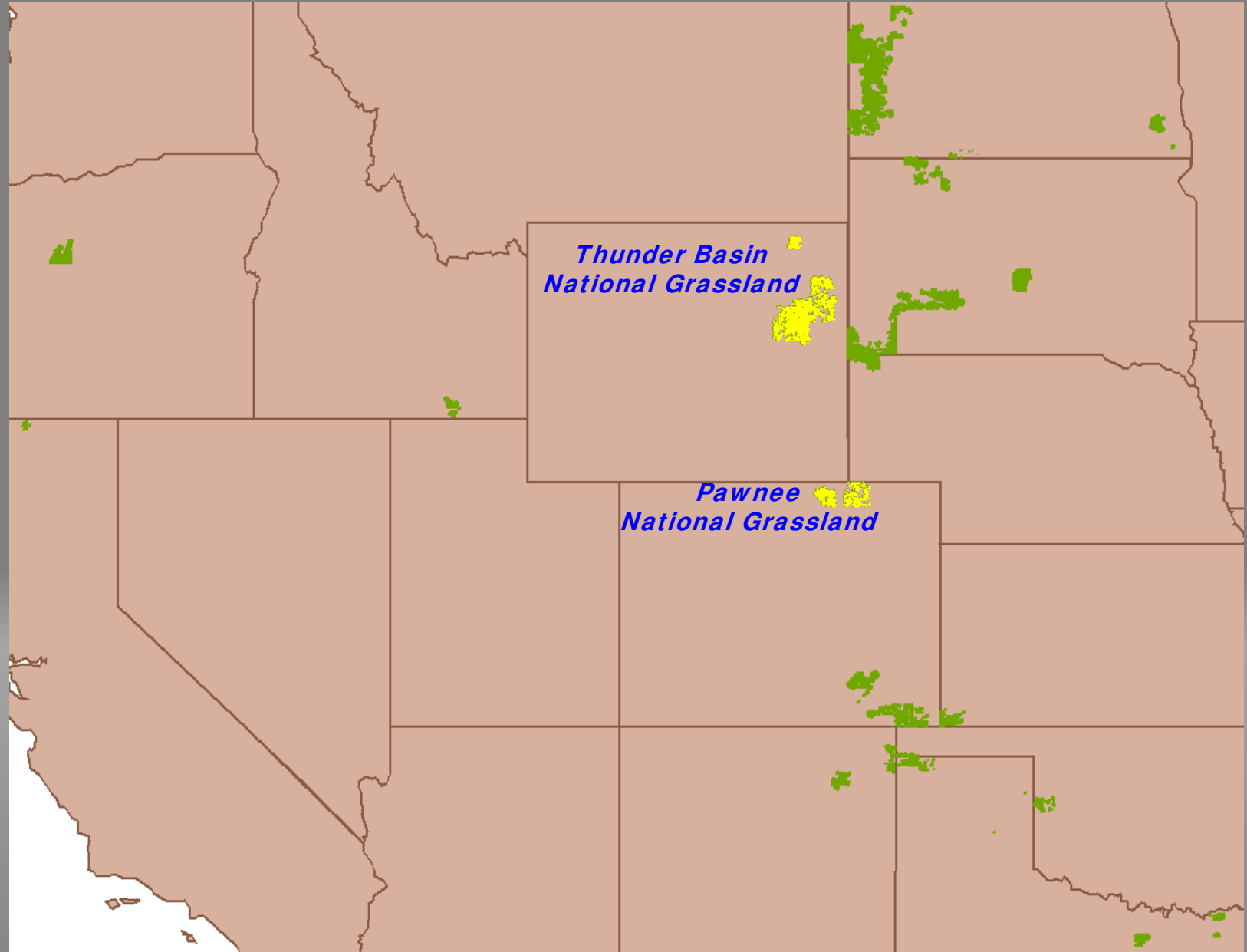
**Short-Grass/Bare-Ground
Habitat Requirement**

Disturbance



USFS

- Species of Focus
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On Thunder Basin National Grassland...



USFS



Black-tailed Prairie Dog
(*Cynomys ludovicianus*)

On Pawnee National Grassland...

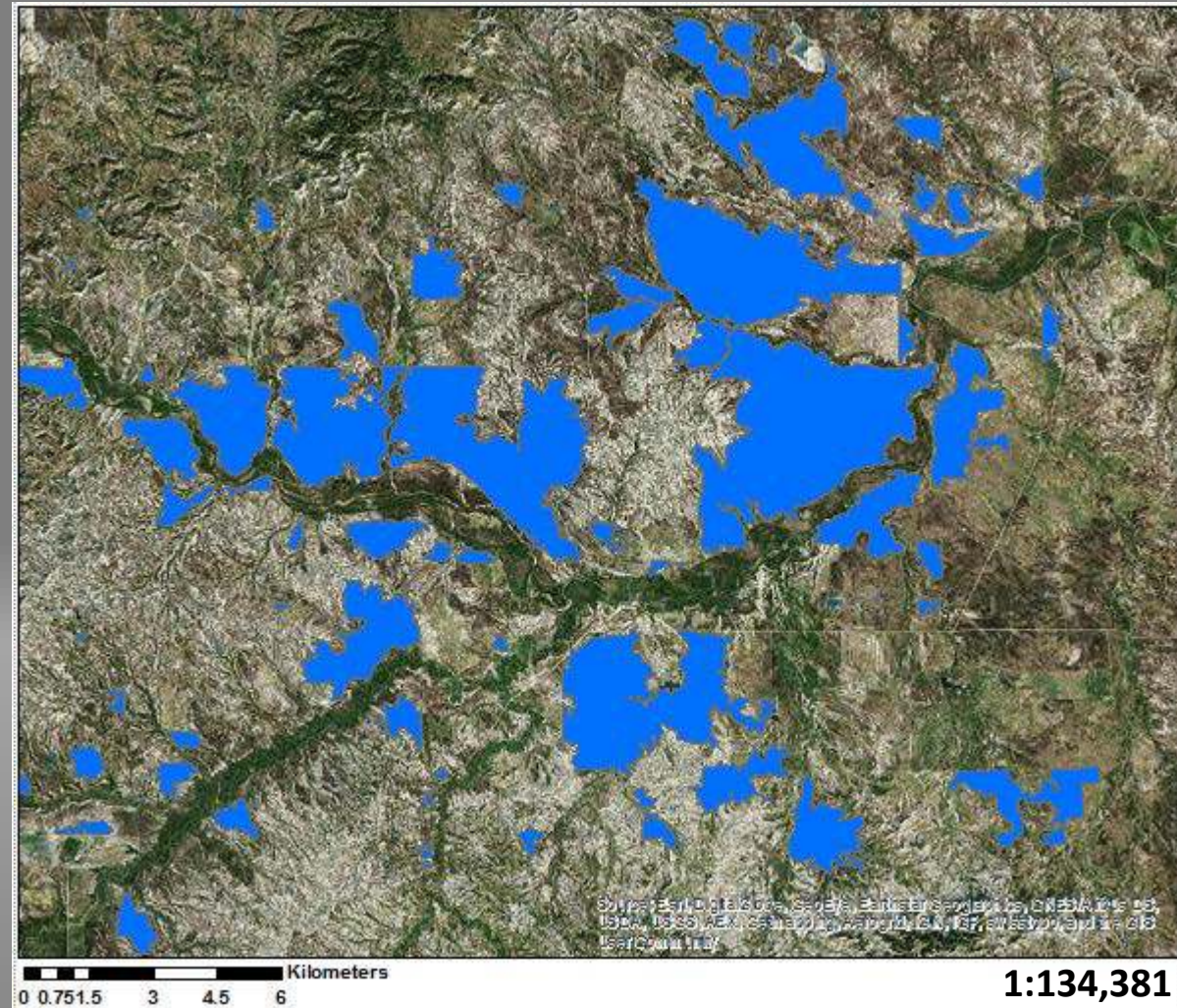


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TBNG

Colony fluctuation caused by sylvatic plague outbreaks

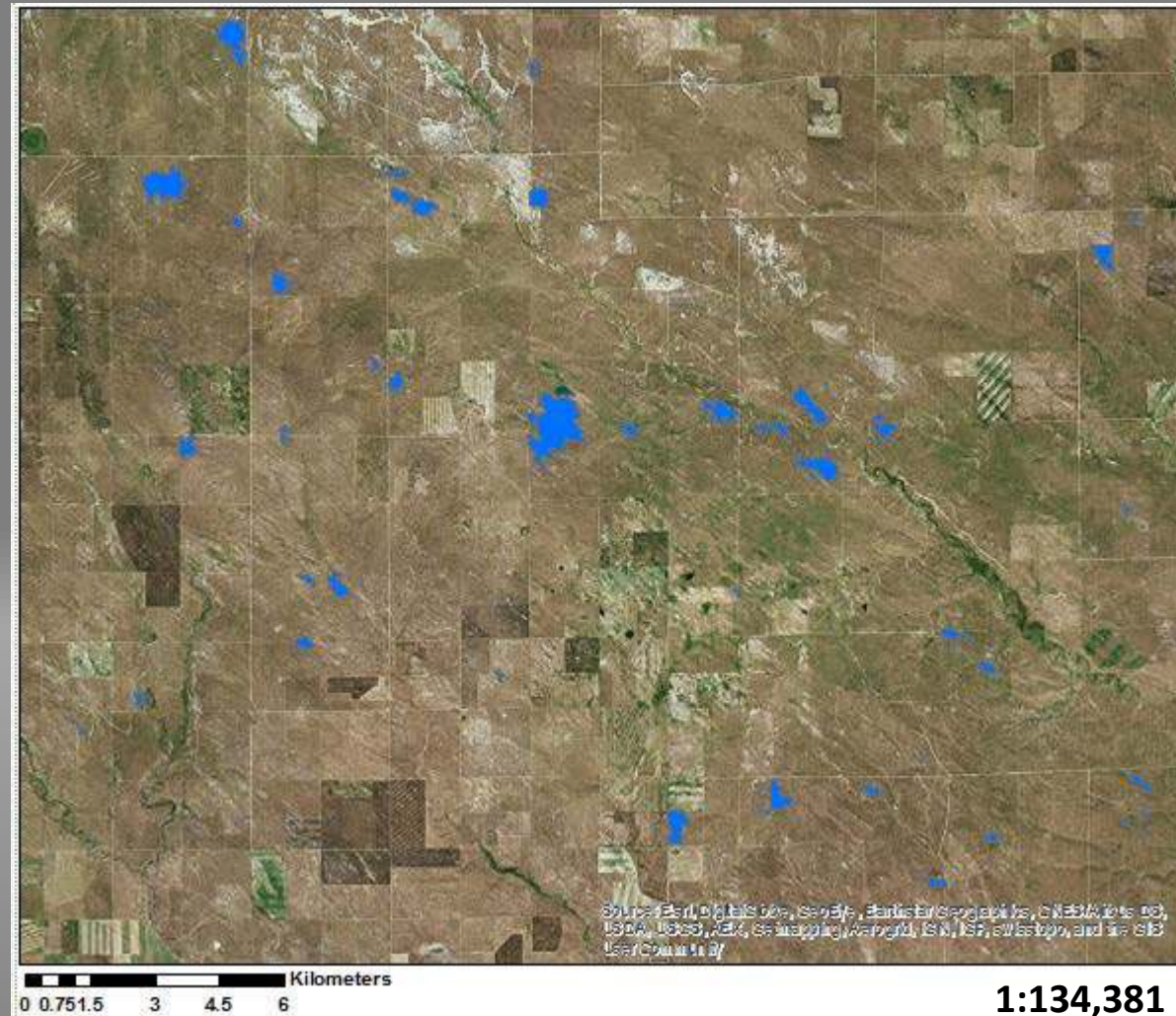


2015

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PNG

Colony fluctuation caused by sylvatic plague outbreaks



2015

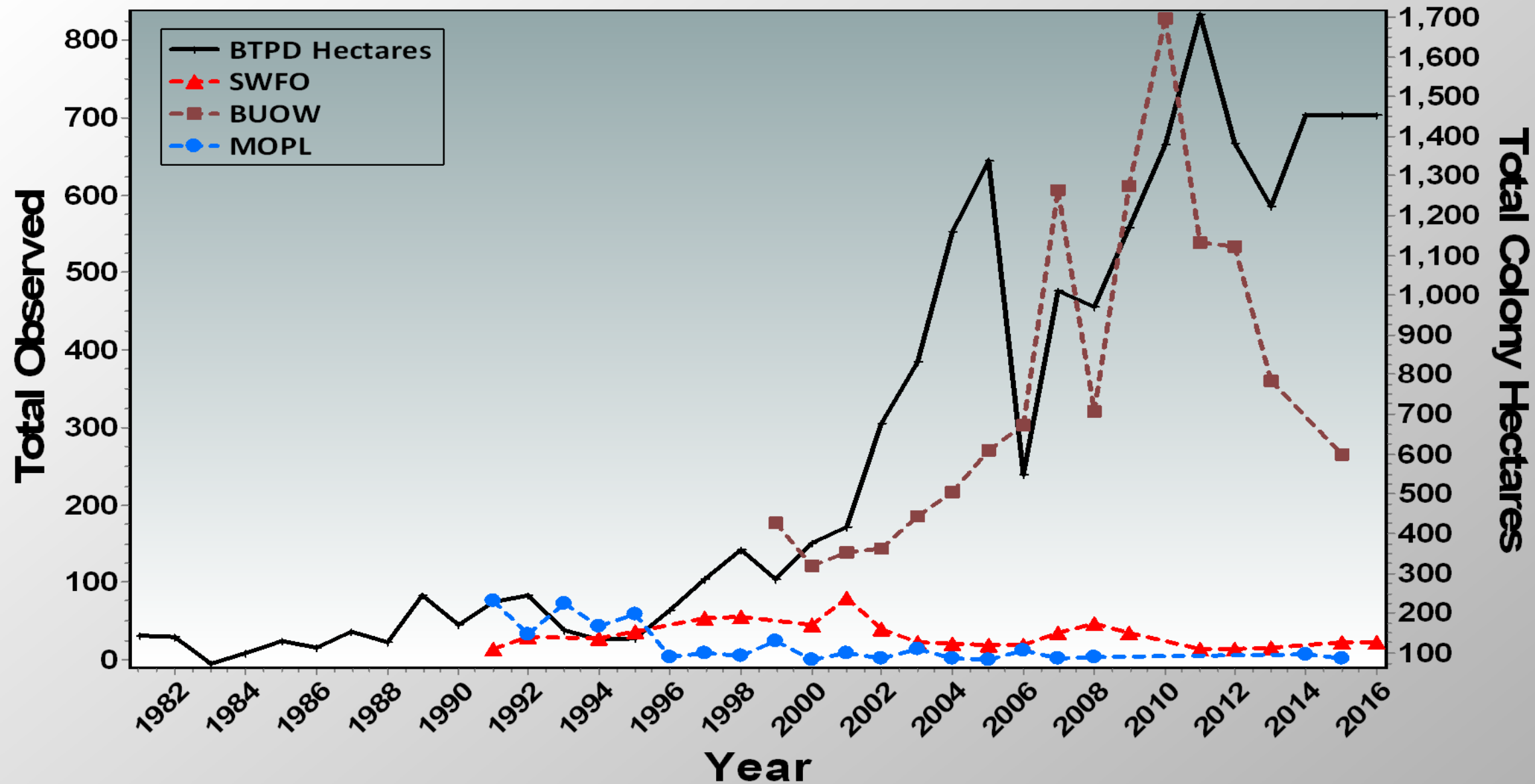
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Population Trends

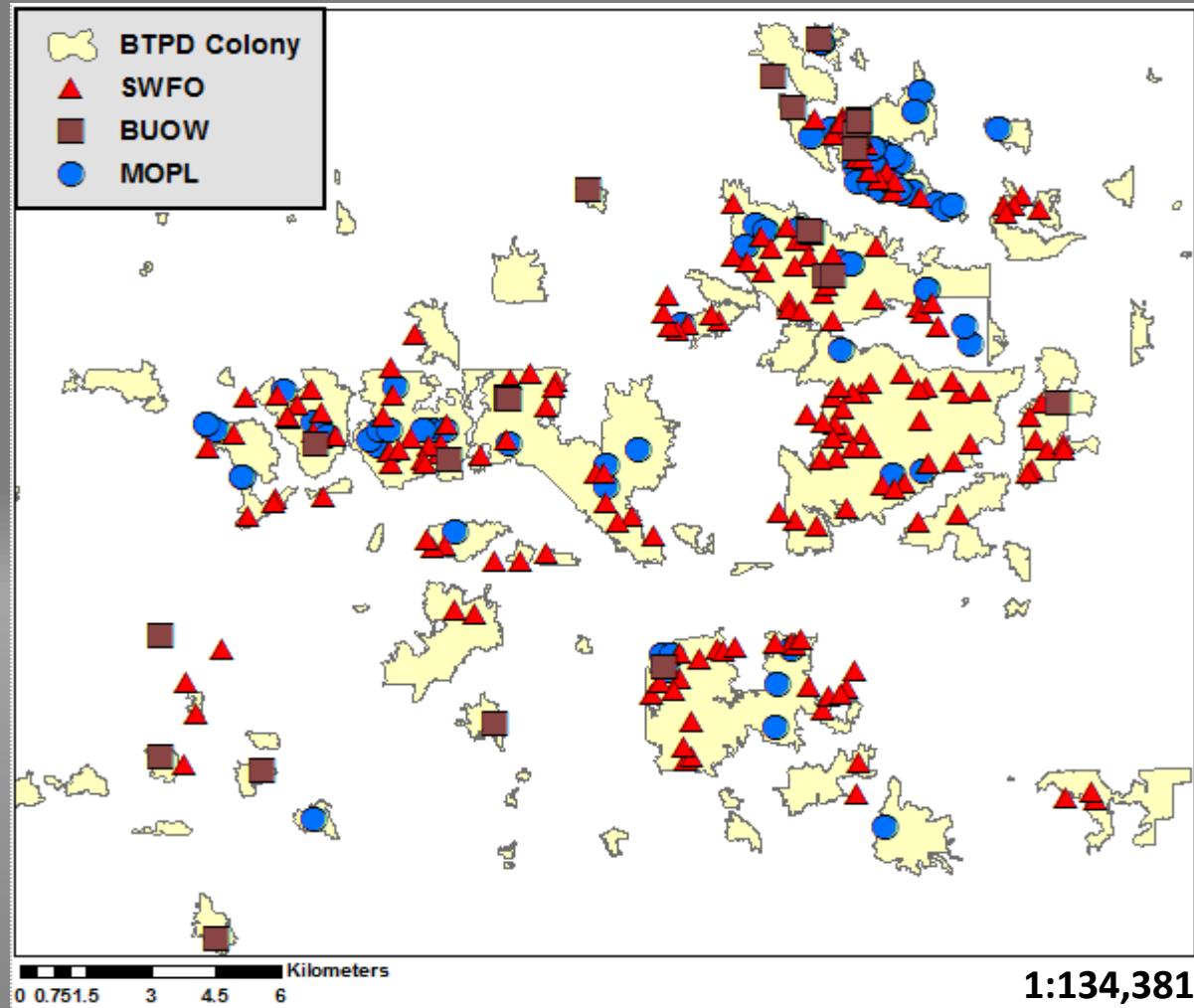
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Predator-Prey Relationships

Intraguild Predation?

Mesopredator Release?



Colony Size? Other Factors?

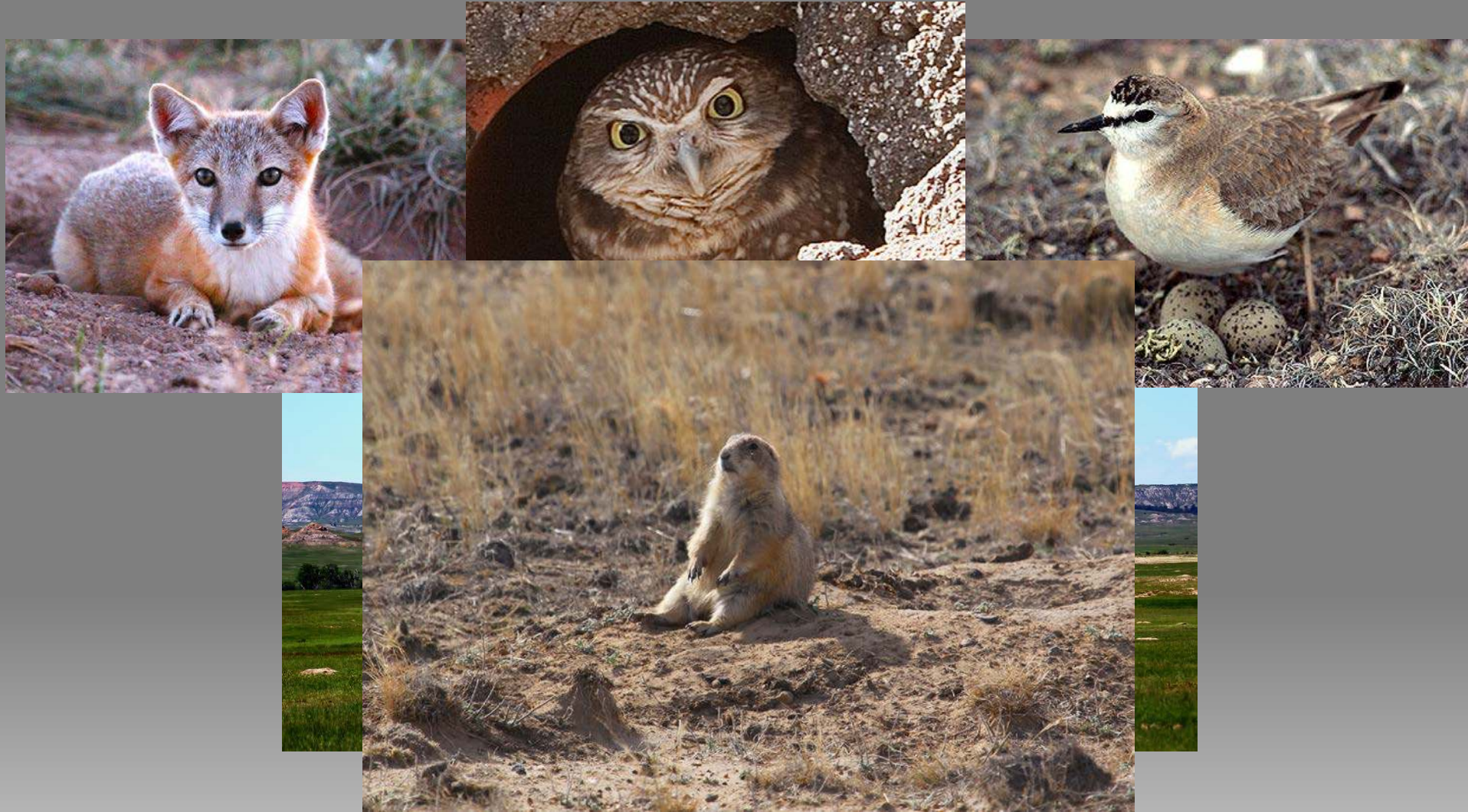
Trophic Interaction?



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Multi-Species Occupancy



Survey Colonies ≥ 3 Times $\rightarrow$ Models to Identify Relationships

Acknowledgements



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