



# Mayacamas Wildlife Camera Grids & Vision for Bay Area Regional Network

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Pepperwood Foundation





Pepperwood's mission is to advance science-based conservation throughout our region and beyond





# Tubbs Fire - October 2017



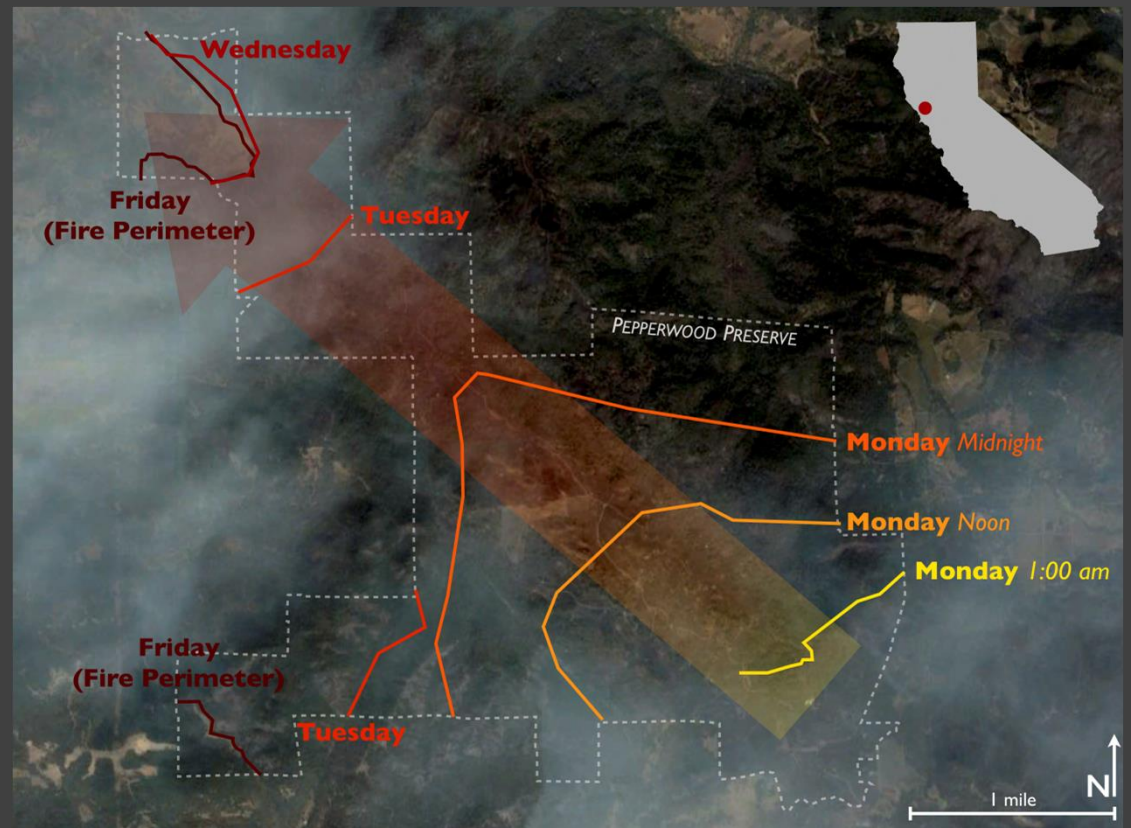
Tim Carr  
TIM CARR PHOTOGRAPHY





## Tubbs Fire Burn Times

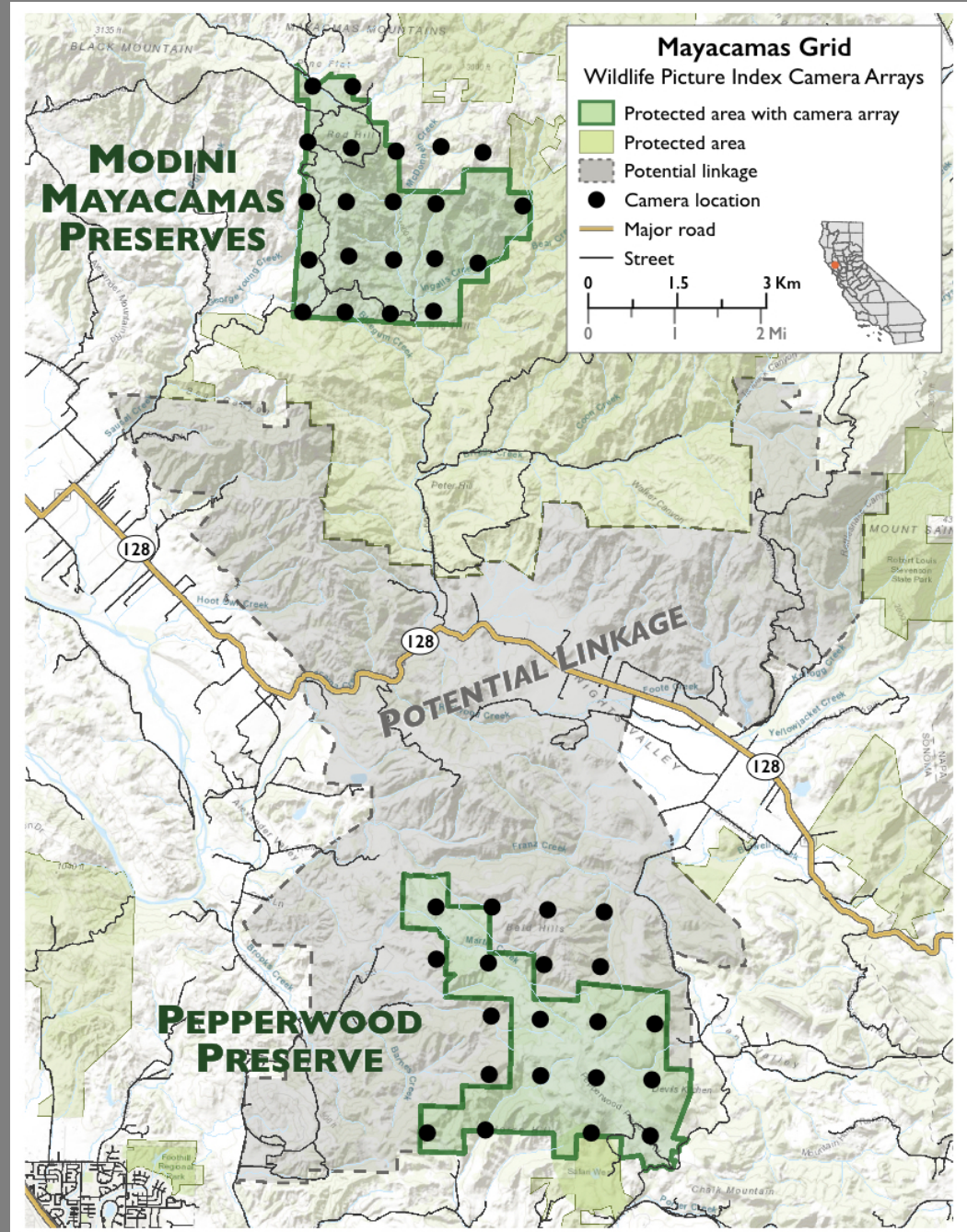
Courtesy of David Ackerly, UC Berkeley





# Approach

- mobile array
- 2 WPI grids
- 1 km spacing
- collaboration
- citizen science
- intern program
- added Tech & Analyst
- analysis underway



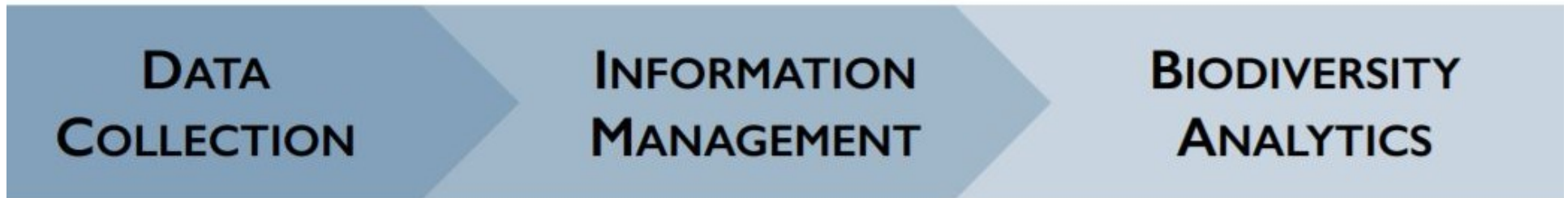
# Project Goals: Wildlife Photo Index

1. Establish baseline occupancy estimates
2. Monitor trends in species, behavior, and abundance
3. Use occupancy estimates to assess cores & corridors
4. Assess environmental drivers and test management

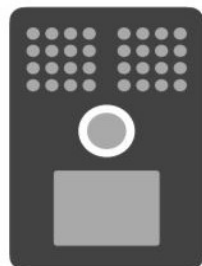




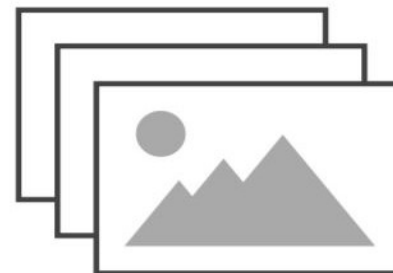
# Wildlife Photo Index Workflow



1 Collect images at camera grid



2 Retrieve image files



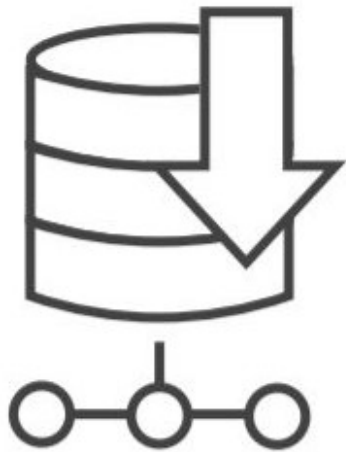
# Wildlife Photo Index Workflow

DATA COLLECTION

INFORMATION MANAGEMENT

BIODIVERSITY ANALYTICS

3 Populate database



4 Identify & catalog animals



5 Expert review of data





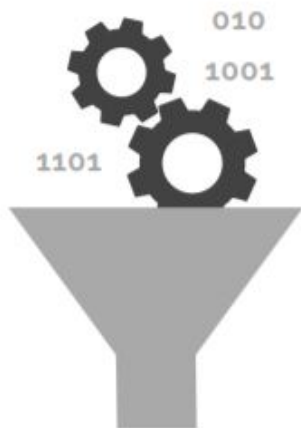
# Wildlife Photo Index Workflow

DATA COLLECTION

INFORMATION MANAGEMENT

**BIODIVERSITY ANALYTICS**

6 Analyze data



7 Generate biodiversity metrics



8 Summarize results



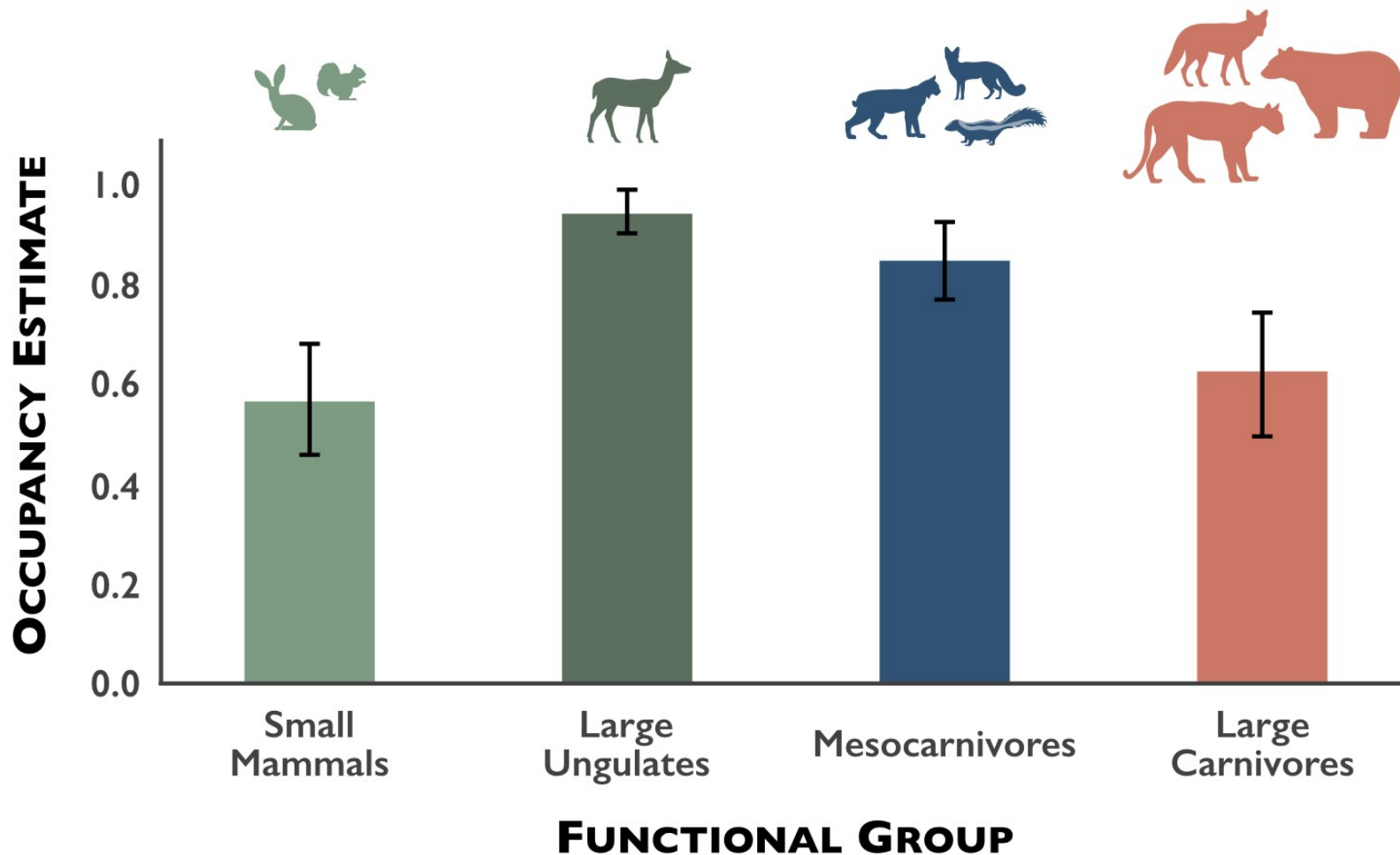
Inform wildlife  
and land  
management



Contribute to  
regional  
understanding



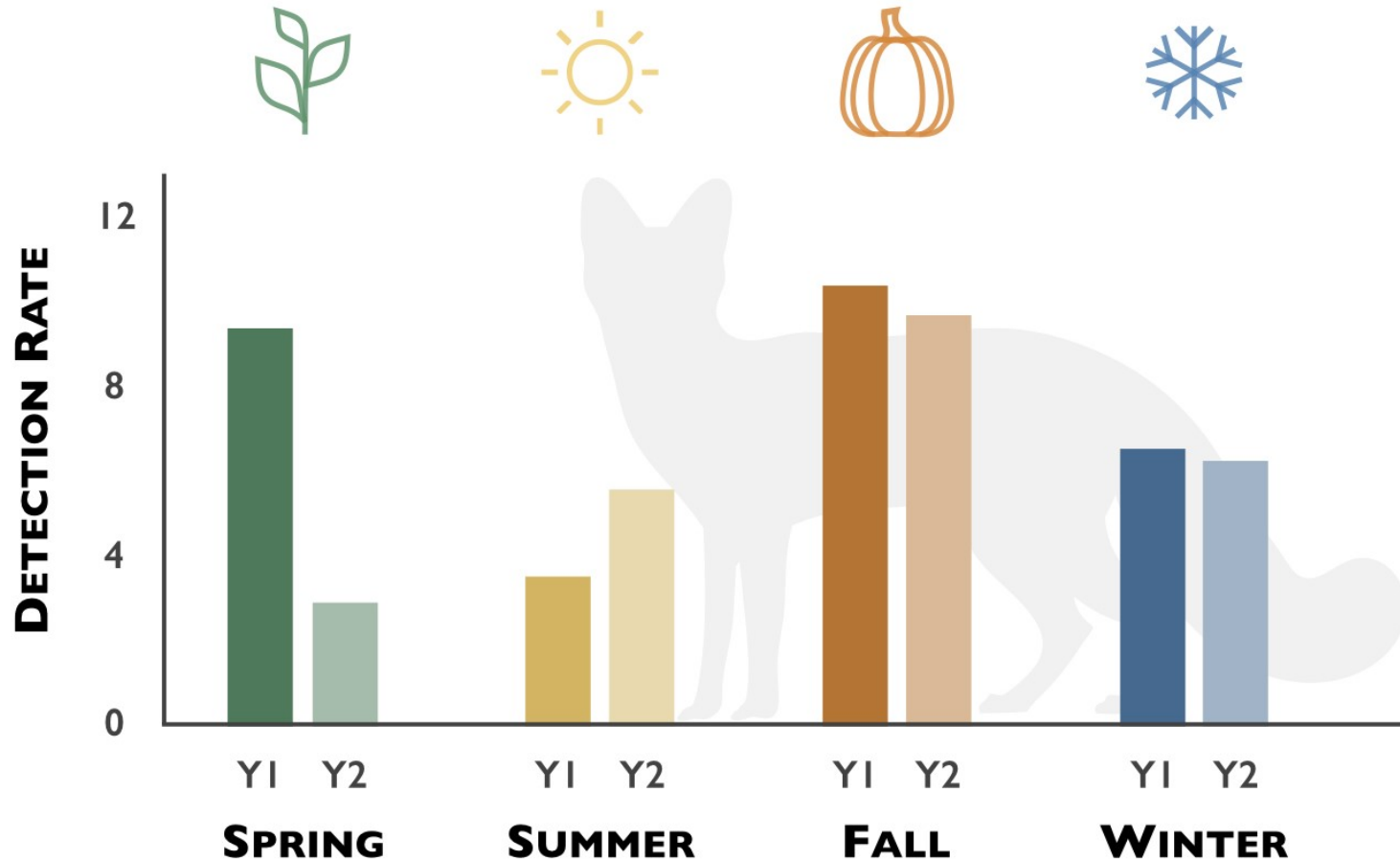
# Occupancy estimates for taxonomic groups



\*Season 1 (Fall) analysis by Dr. Sue Townsend



# Gray fox detection rates by season

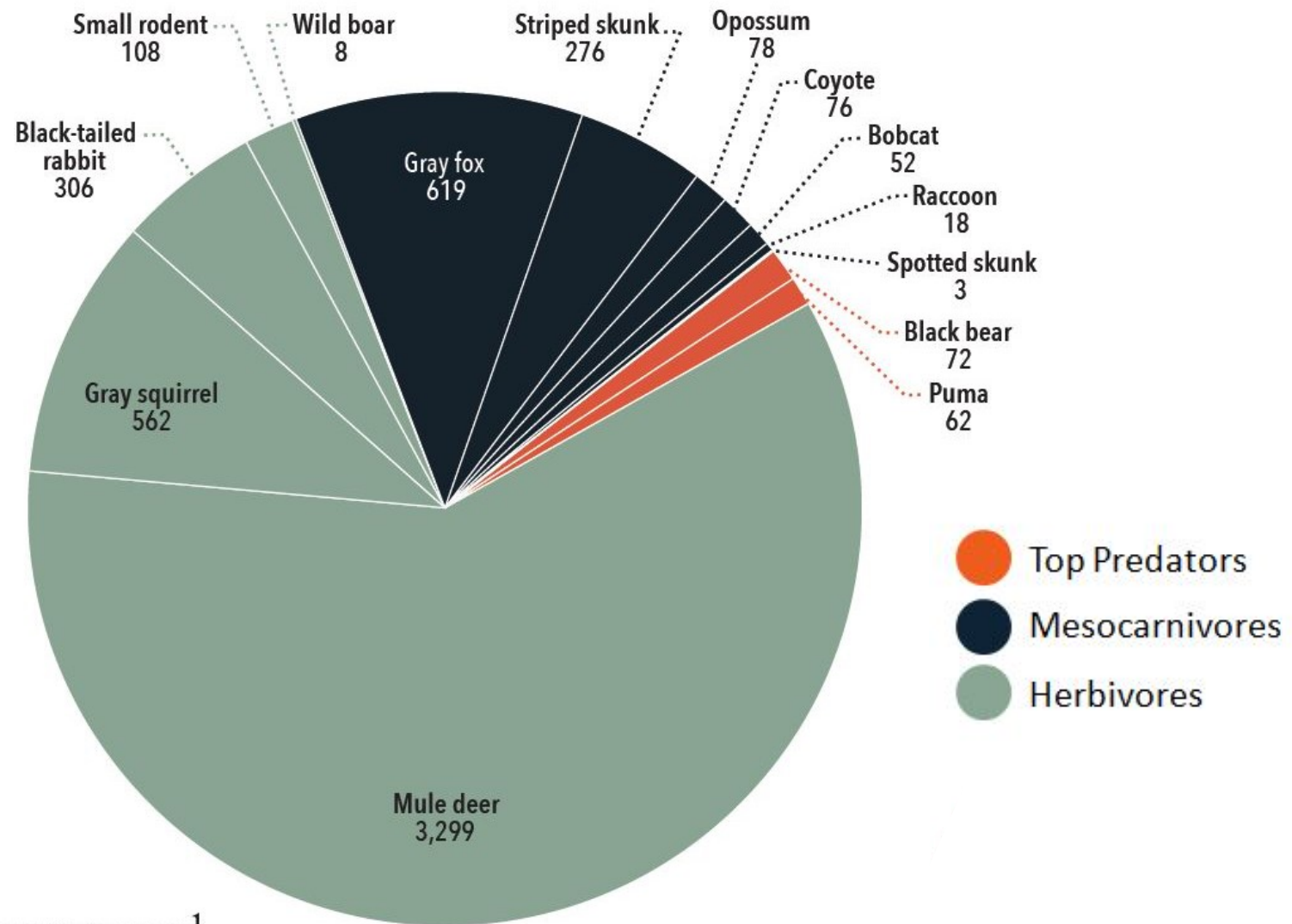


\*Season 1 analysis by Dr. Sue Townsend

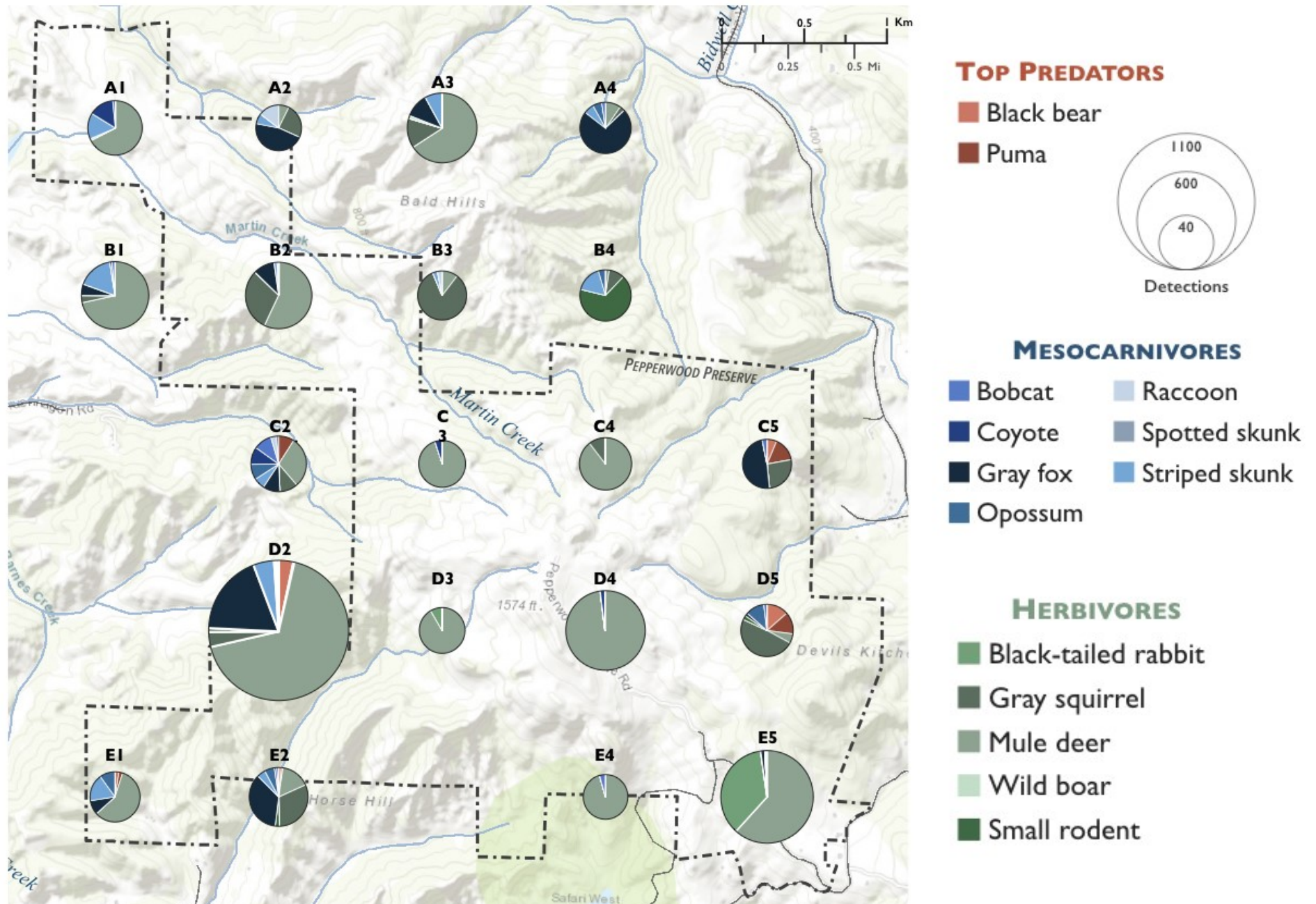


# Number of mammal detections and species diversity

## March – June 2016



# Mammal Detections at Pepperwood (March – June 2016)





## Next: Vision for Bay Area Regional WPI

1. Camera grids across 10 counties
2. Expand user network for training
3. Create science & technical advisory team
4. Create shared data platform & analytics
  - Wildlife Insights Initiative
  - streamline cataloging
  - easy to use analytics
  - data dissemination



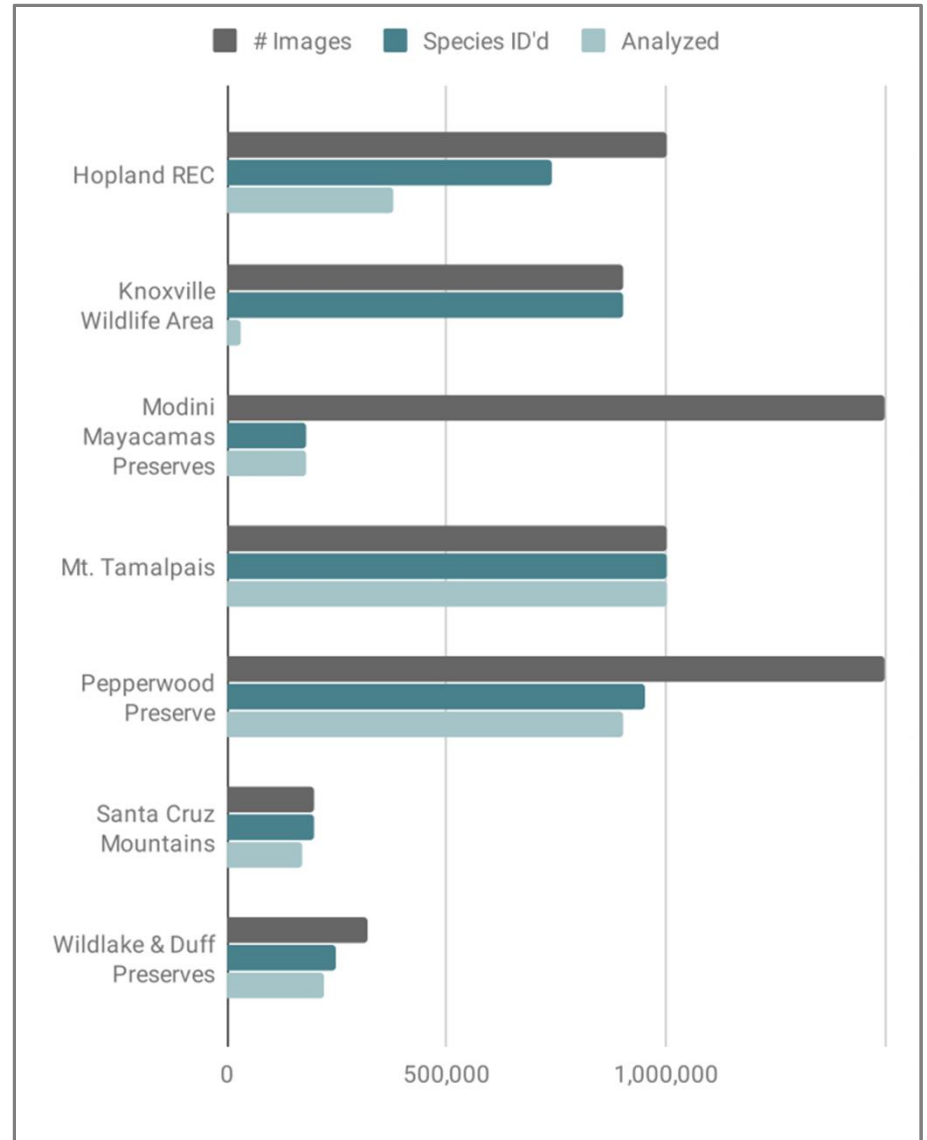
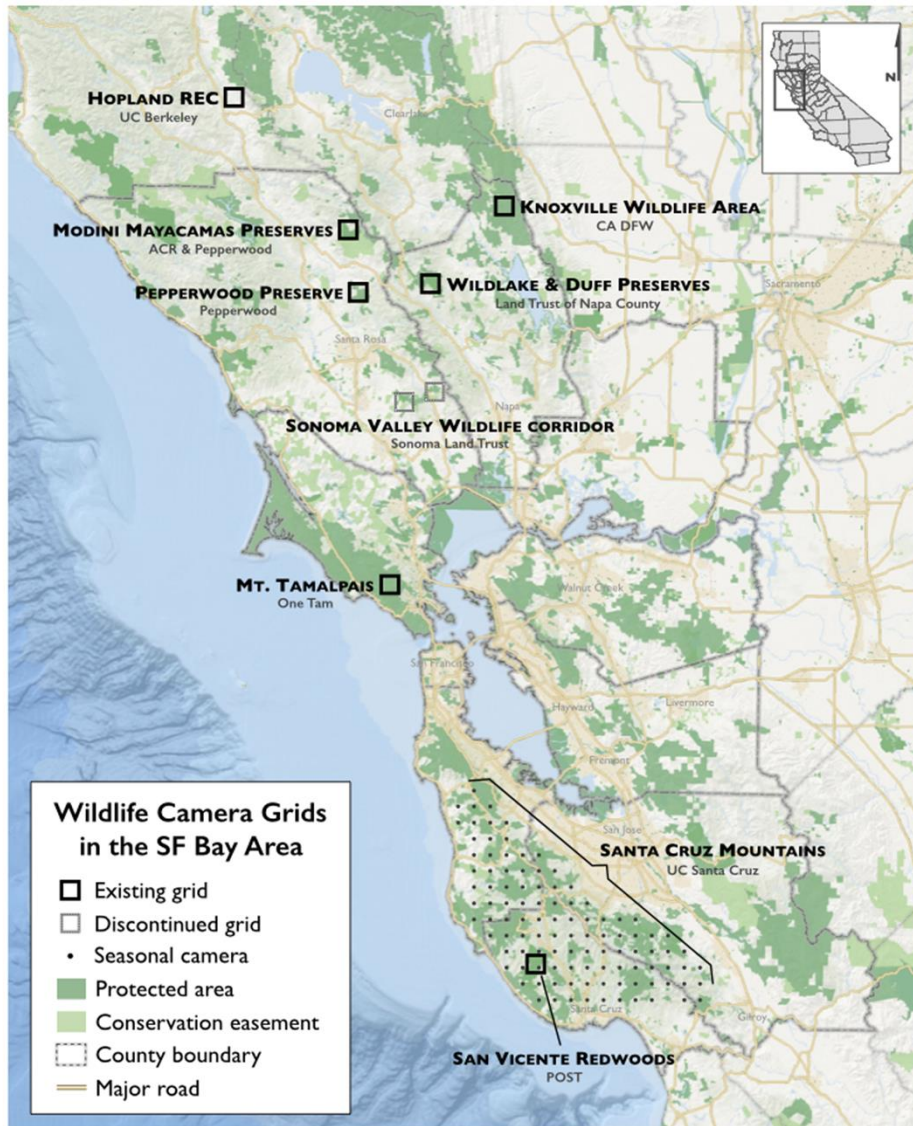
# Wildlife Observer Network

- Peer learning group
- Technical support for users
- Input to Wildlife Insights
- Next steps:
  - establish new WPI grids
  - update training





# Wildlife camera grid data in the SF Bay Area



# New tool for data management & analysis – Spring 2019

<https://www.wildlifeinsights.org/>



EXPLORE

GET INVOLVED

ABOUT

 SIGN IN



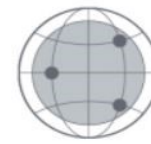
Contribute photos



Identify species



Analyze data



Discover trends



Smithsonian Institution





# Recommendations

1. Develop rigorous protocols and standards
2. Develop clear data use & publishing policies
3. Don't underestimate data management
4. Utilize interns, parties, and citizen scientists
5. Fund technical staff positions, as possible
6. Support peer to peer learning groups





Questions?  
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