

Early Barred Owl management in the Sierra Nevada can prevent California Spotted Owl extirpations

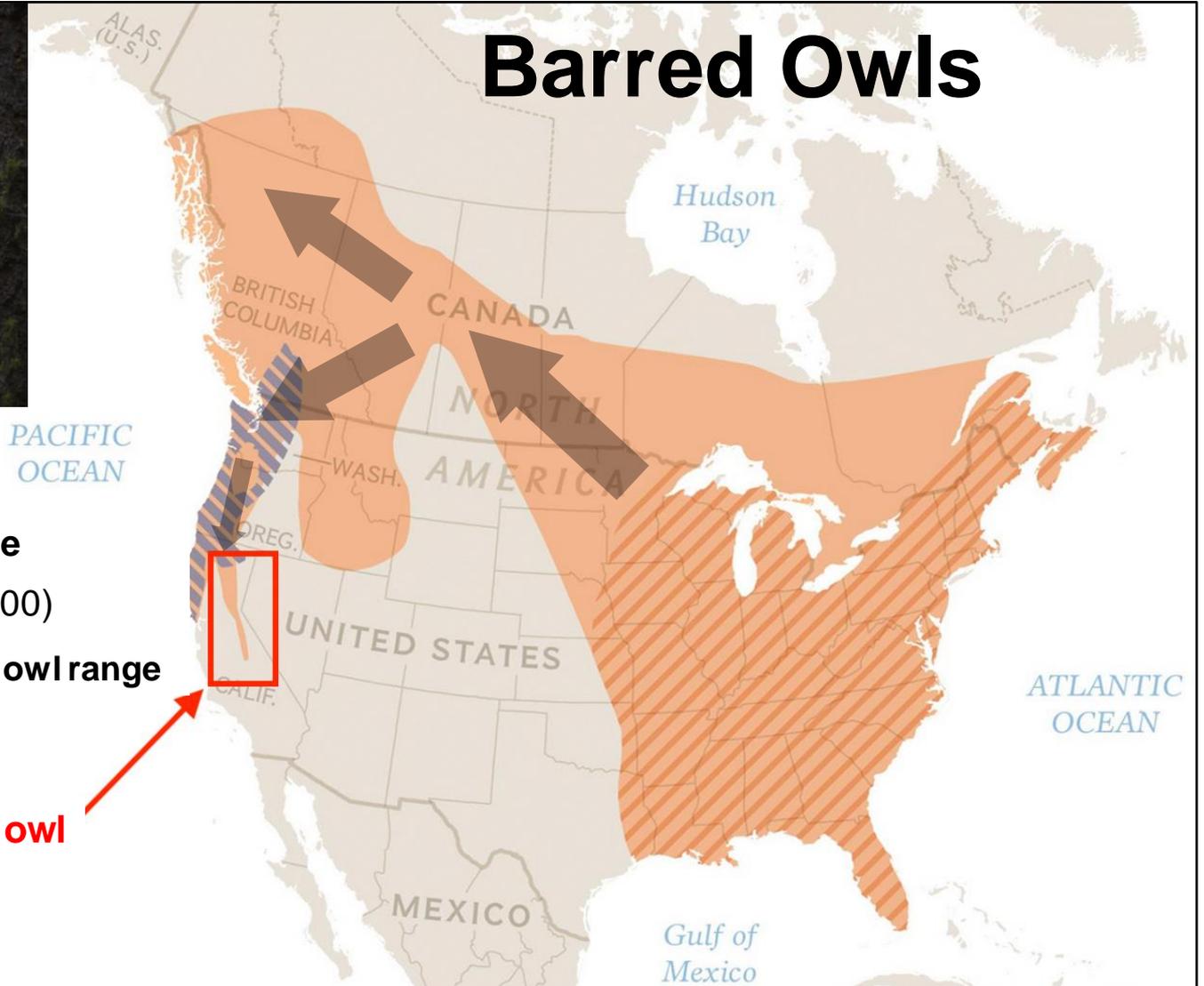
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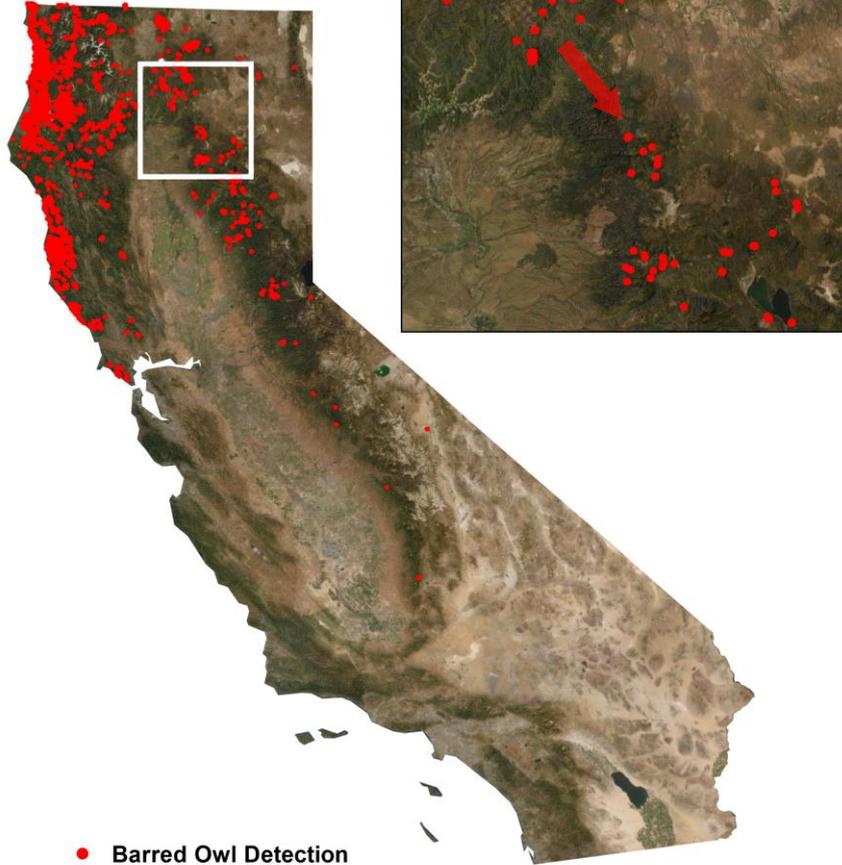
Barred Owls



-  Barred owl range
-  Historical (pre-1900)
-  Northern spotted owl range

California spotted owl

2018

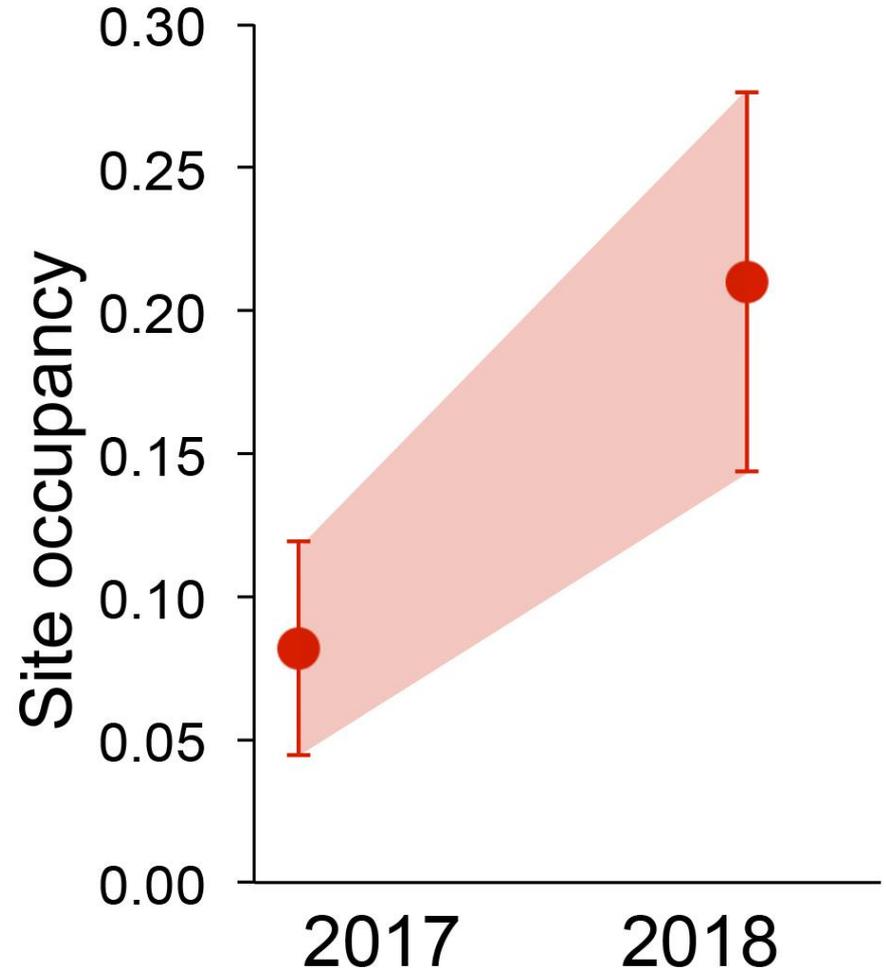


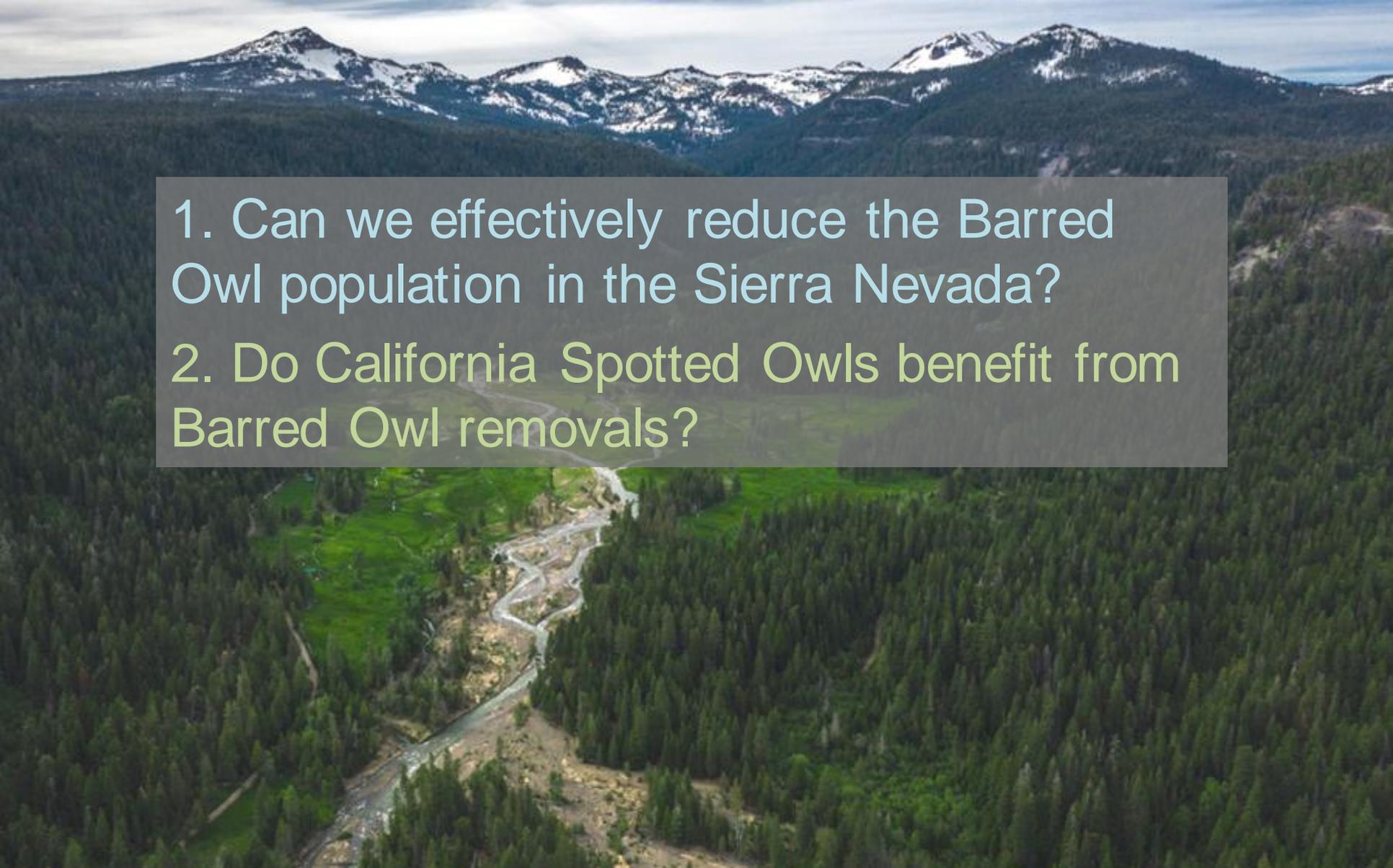
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Wood et al. (2020)



THE CONDOR
Ornithological Applications



An aerial photograph of a mountainous landscape. In the foreground, a dense forest of evergreen trees covers a valley. A river or stream flows through the center of the valley, surrounded by green meadows and some rocky patches. In the background, a range of mountains with patches of snow is visible under a cloudy sky.

1. Can we effectively reduce the Barred Owl population in the Sierra Nevada?

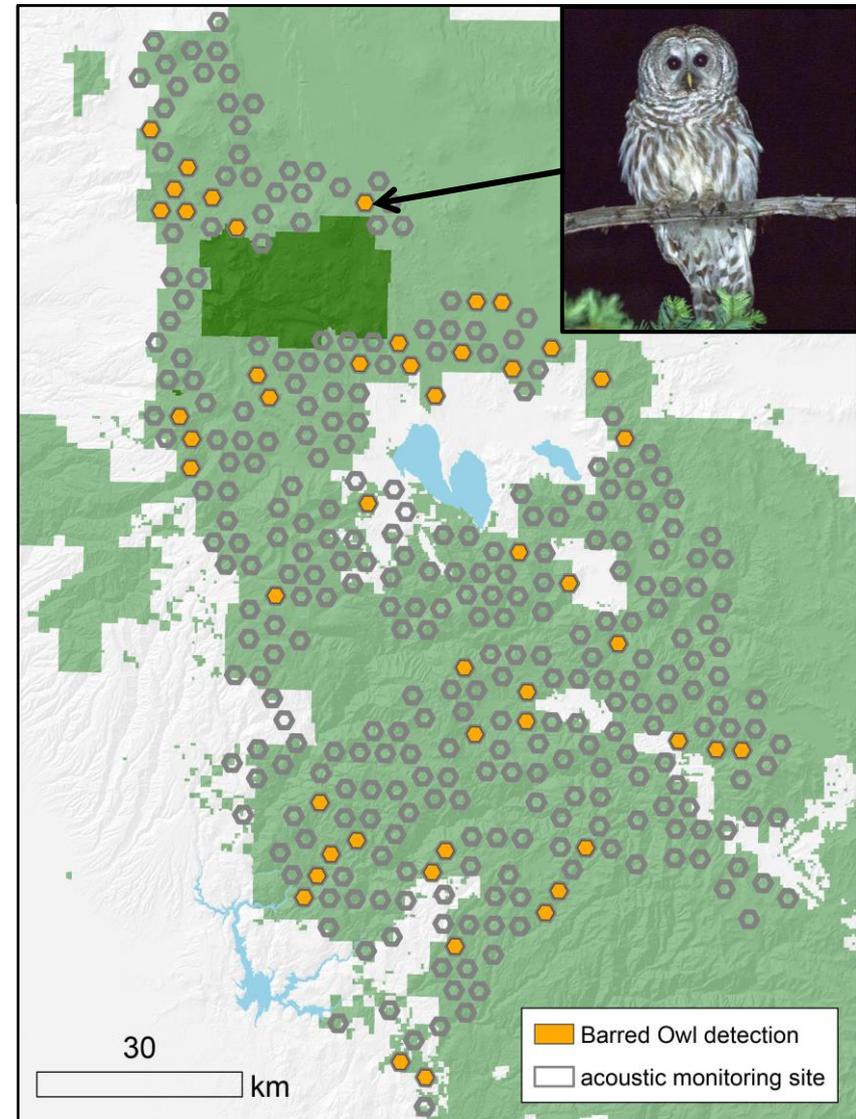
2. Do California Spotted Owls benefit from Barred Owl removals?

Acoustic Monitoring

Wood et al, 2019

+ Active Surveys

Sierra Pacific Industries
Lassen Demography
Institute for Bird Populations
Eldorado Demography
US Forest Service
National Park Service



Lethal Removal



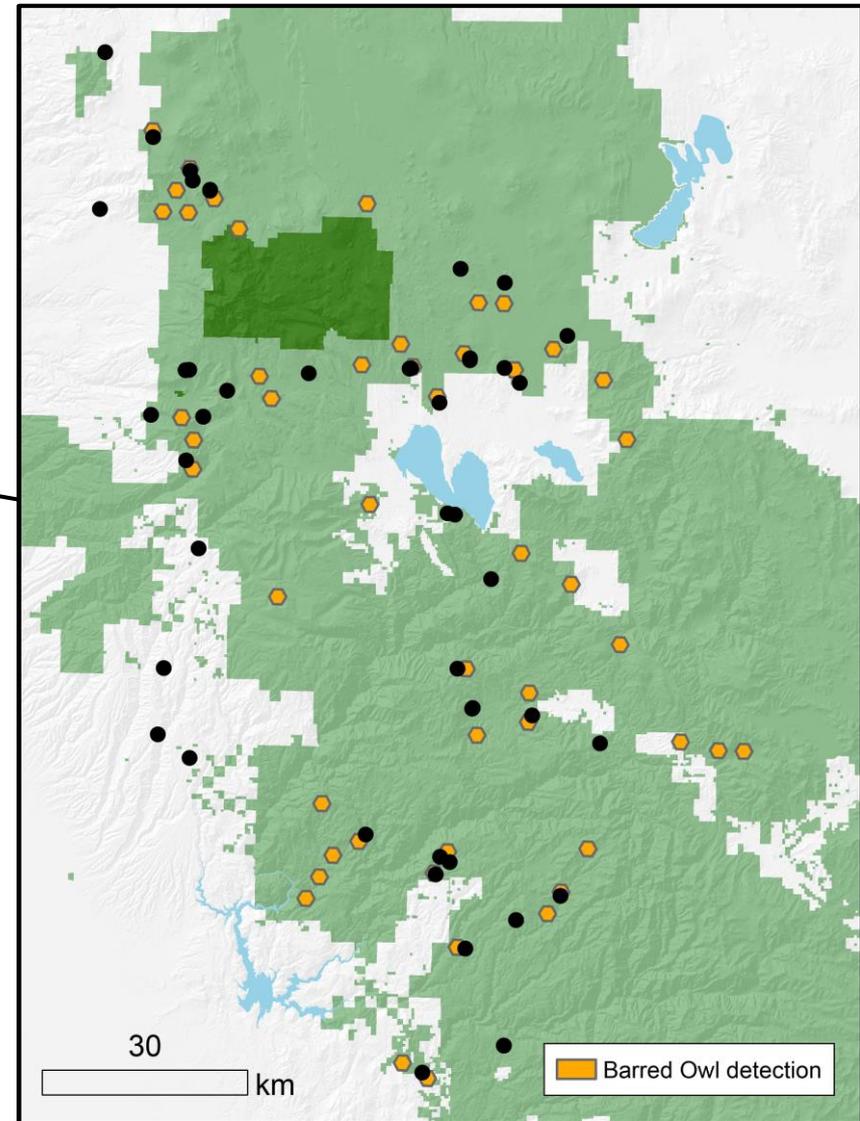
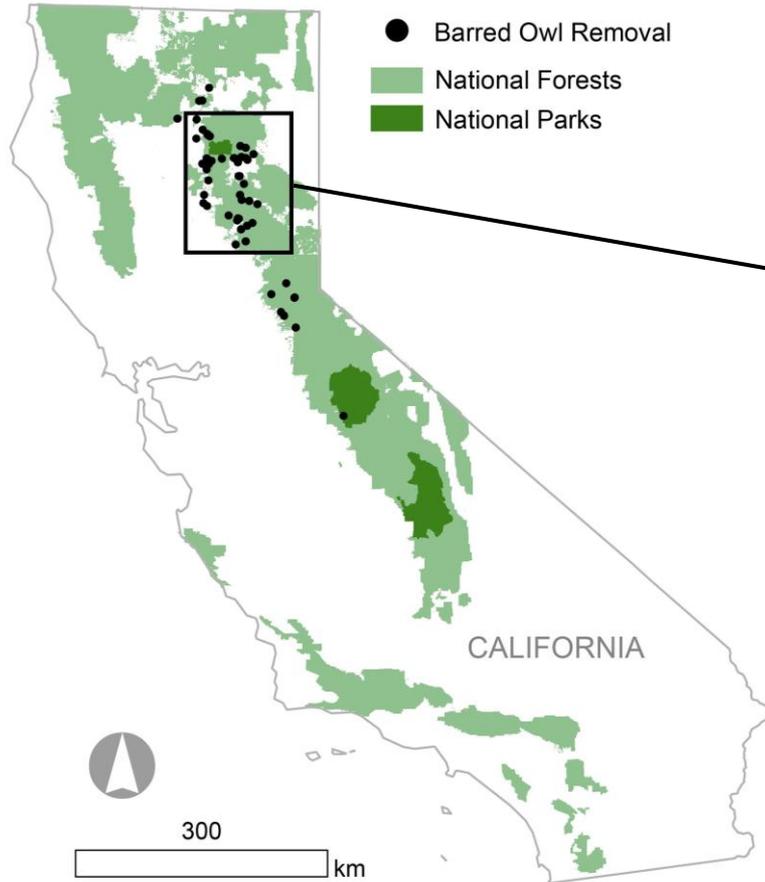
Barred Owl



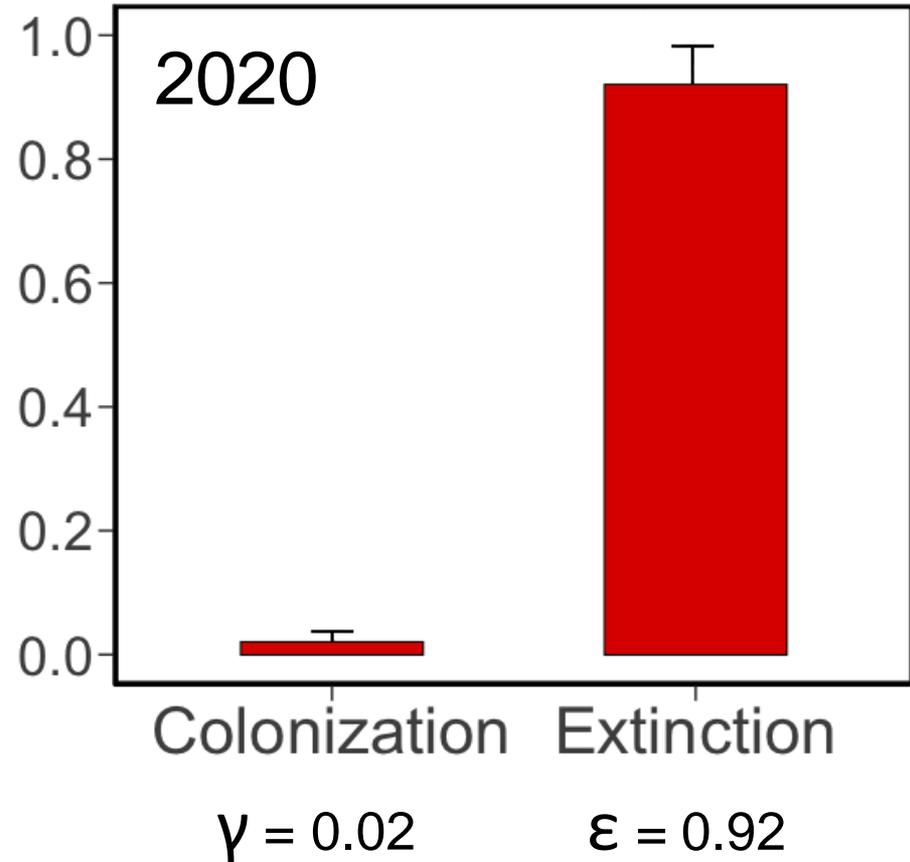
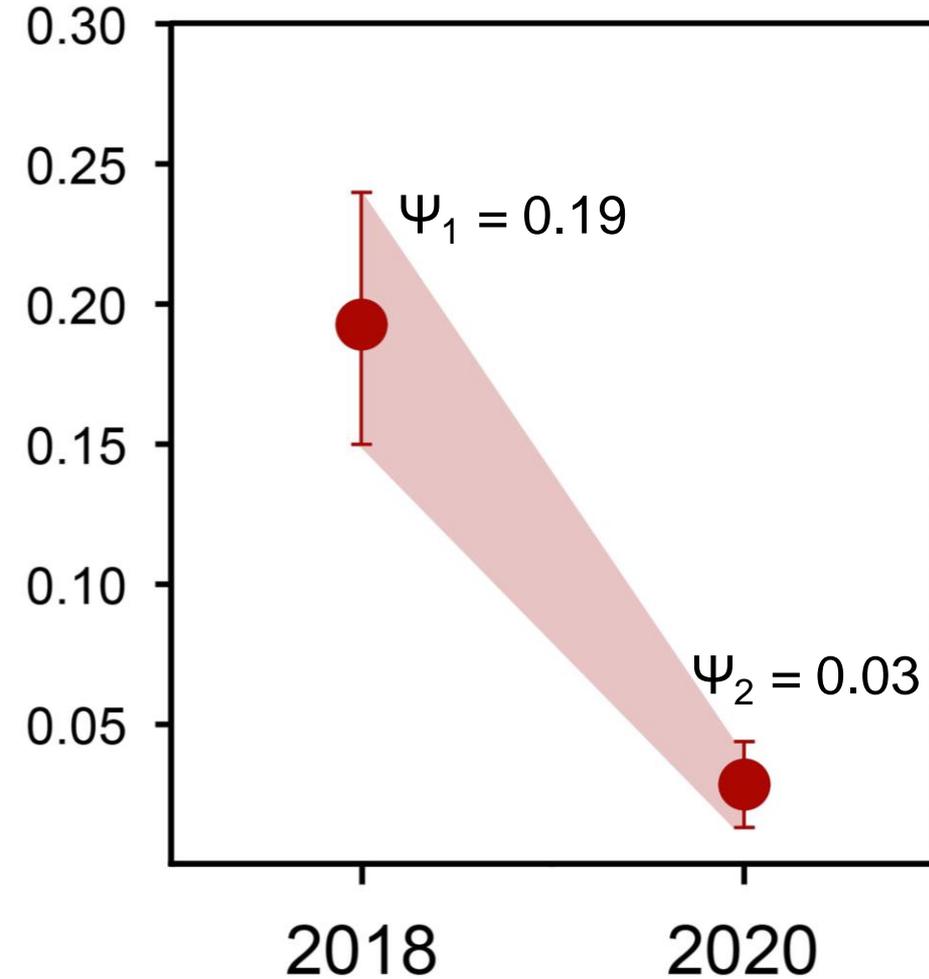
Barred X Spotted Hybrid

Barred Owl Removals

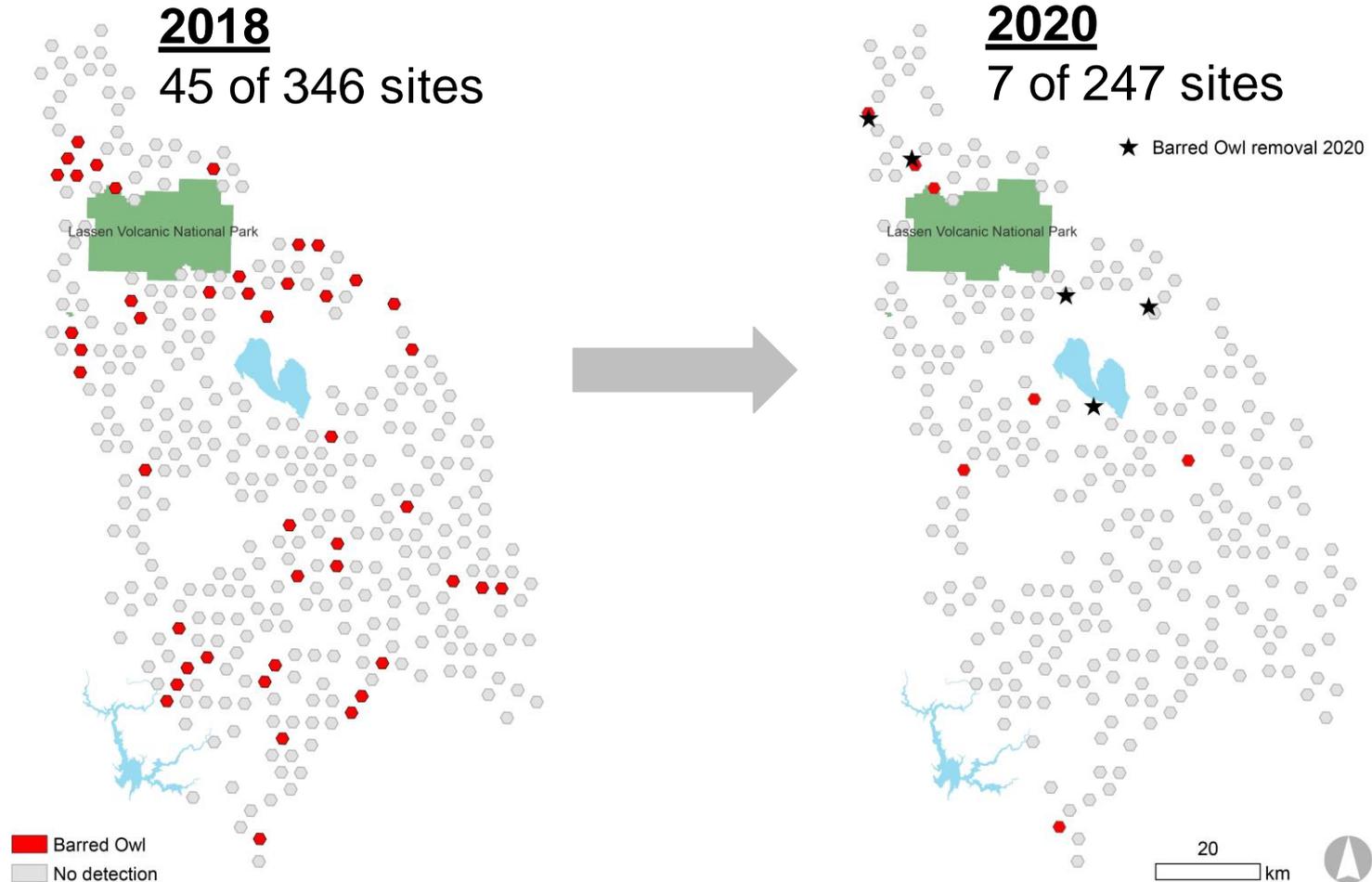
76 total in Sierra Nevada



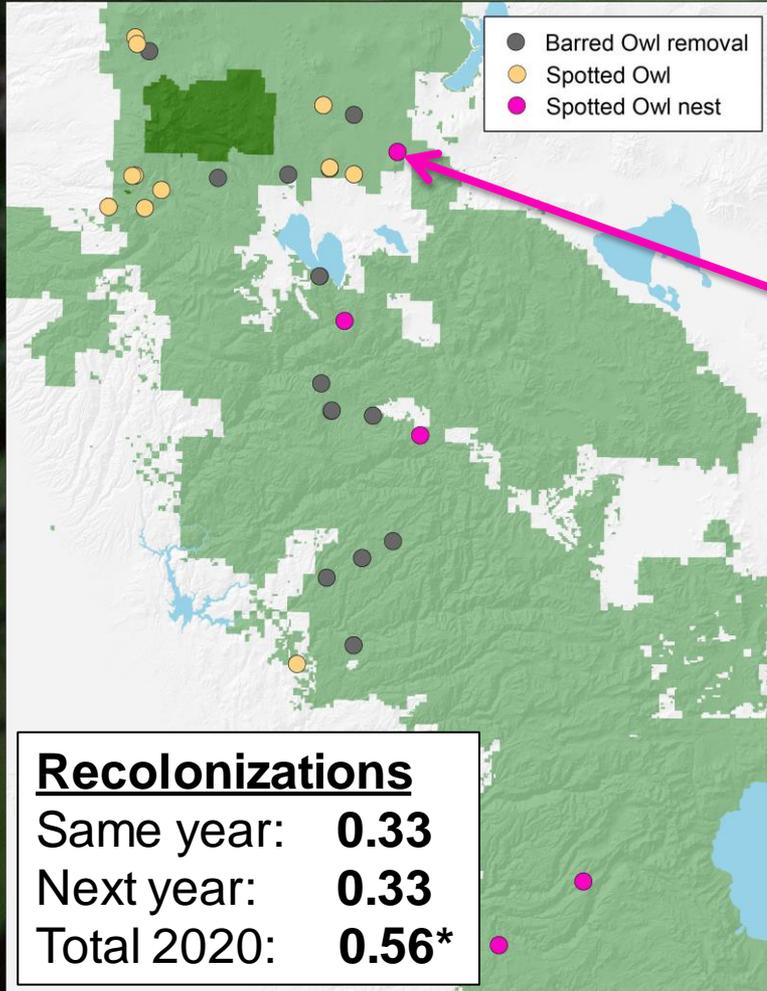
Barred Owl Occupancy

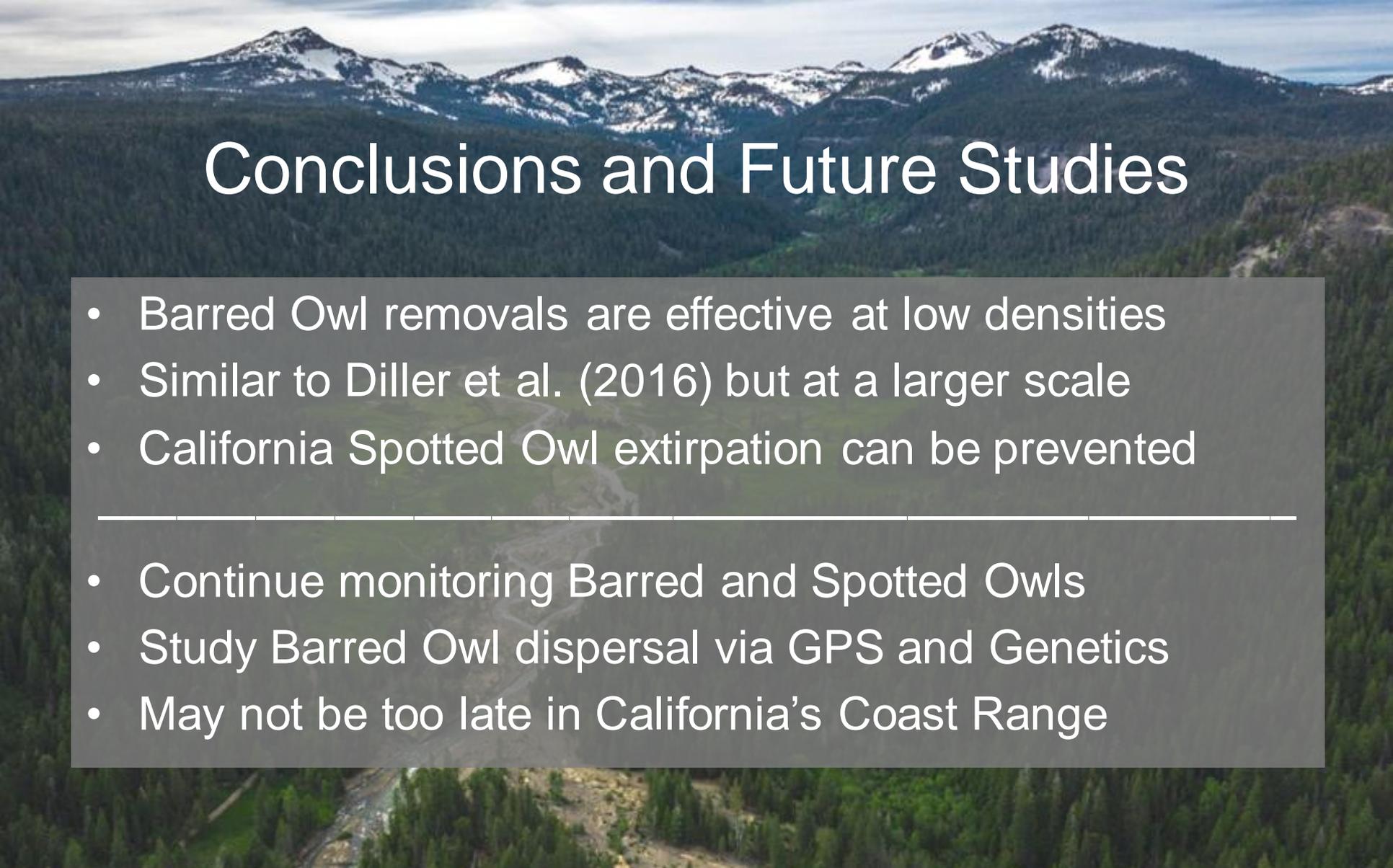


The importance of acting early



Effects on California Spotted Owls





Conclusions and Future Studies

- Barred Owl removals are effective at low densities
 - Similar to Diller et al. (2016) but at a larger scale
 - California Spotted Owl extirpation can be prevented
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- Continue monitoring Barred and Spotted Owls
 - Study Barred Owl dispersal via GPS and Genetics
 - May not be too late in California's Coast Range

Thank You!

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