

# Nest Habitat Characteristics for the Coastal Cactus Wren



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# Coastal Cactus Wren

*Campylorhynchus brunneicapillus ssp. sandiegensis*

- Species of special concern due to habitat loss  
(Dudek 2000)
- Need cactus for nests year round  
(Anderson and Anderson 1957)
- Forage on bare ground and in shrubs for insects and lizards
- Goal: Effective restoration to encourage nesting



# Site Selection



# Site Selection



# Nest Surveys



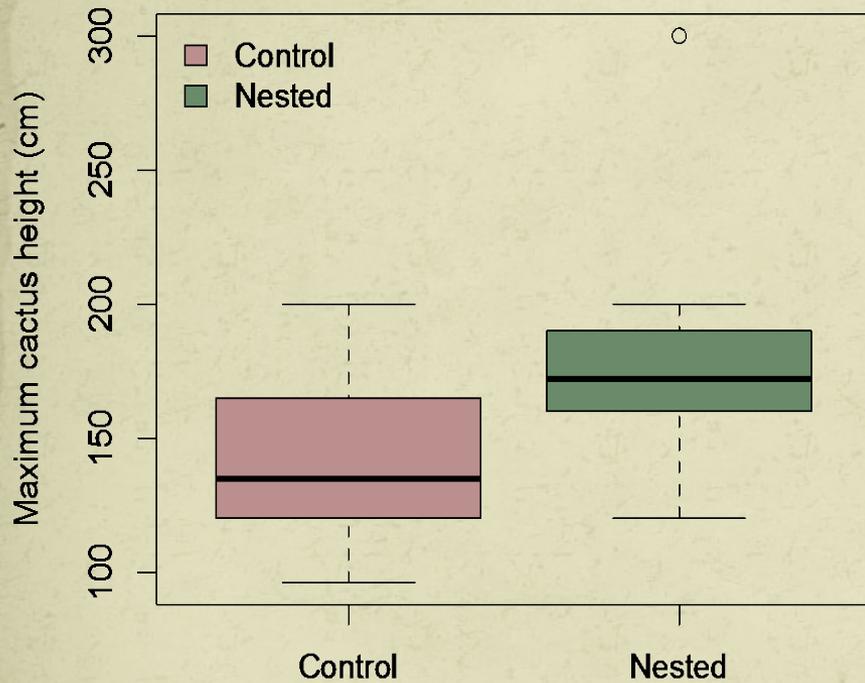
- Cactus characteristics
- Five 10m transects centered over the nest or control pad
- Distance to refuge

Nests: 20

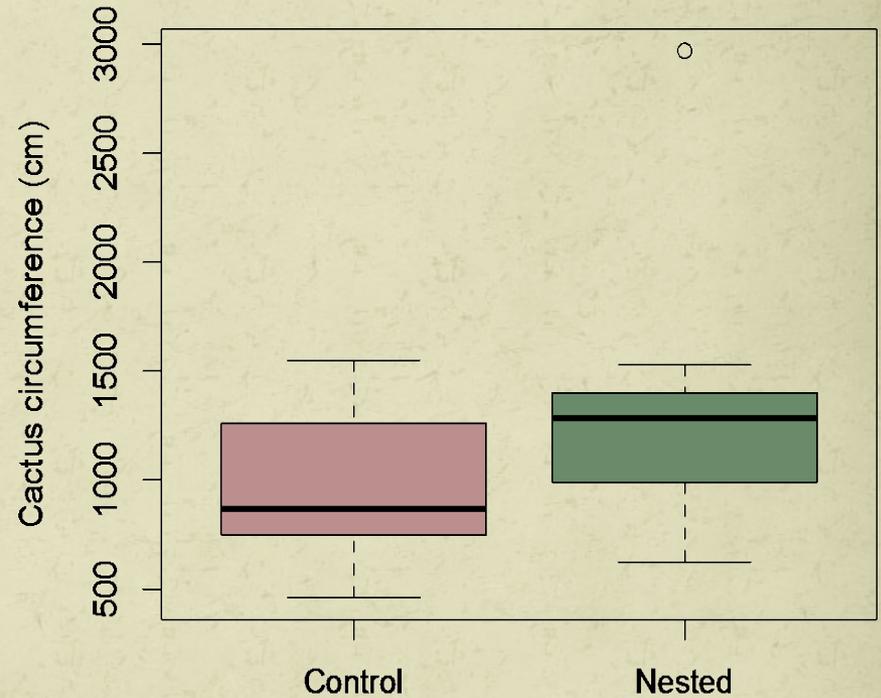
Controls: 20

# Nests were found in larger cacti

## Height



## Circumference



Manova:  $F_{(1,37)}=6.60$ ,  $p=0.003$

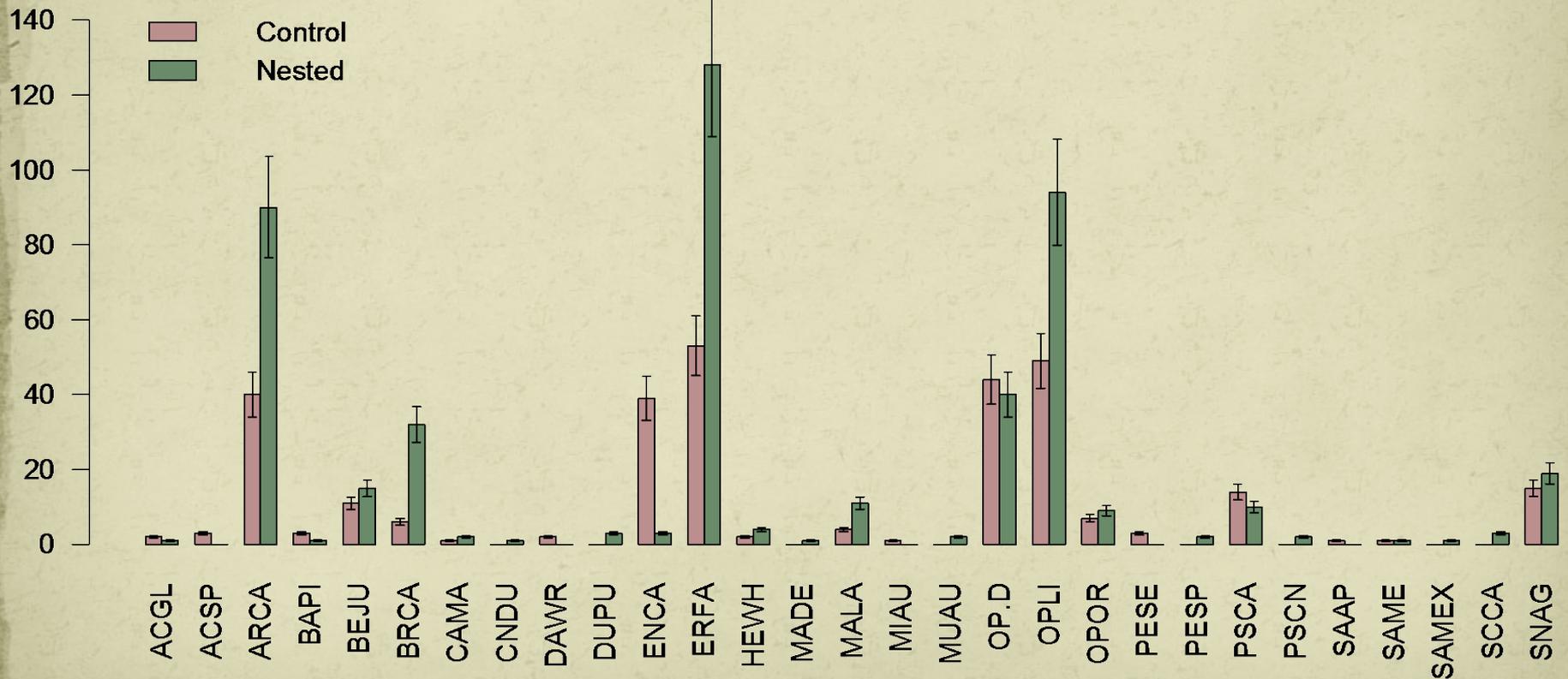
# An open foraging area was typical at nested sites



Anova:  $F_{(4,2154)}=10.0, p=0.001$

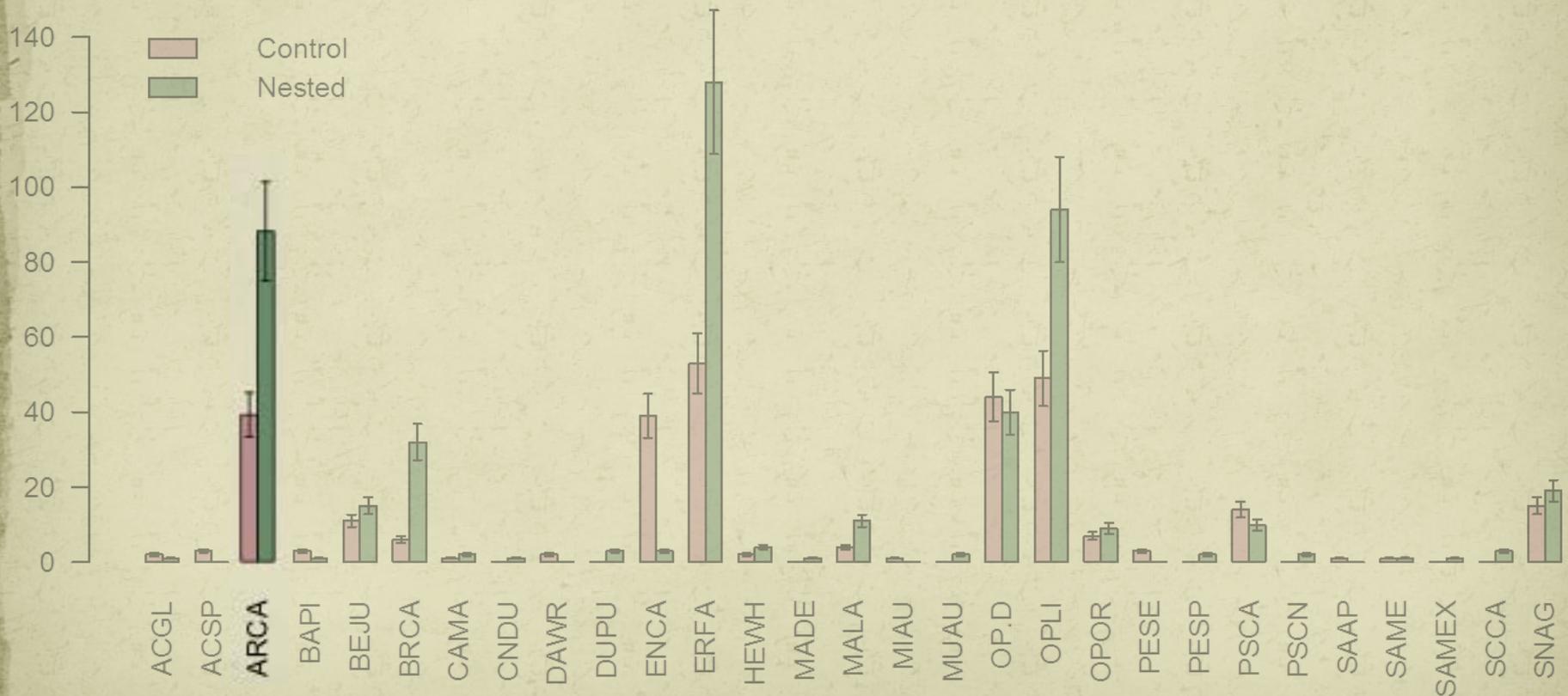


# Species frequencies differ at nested and un-nested sites



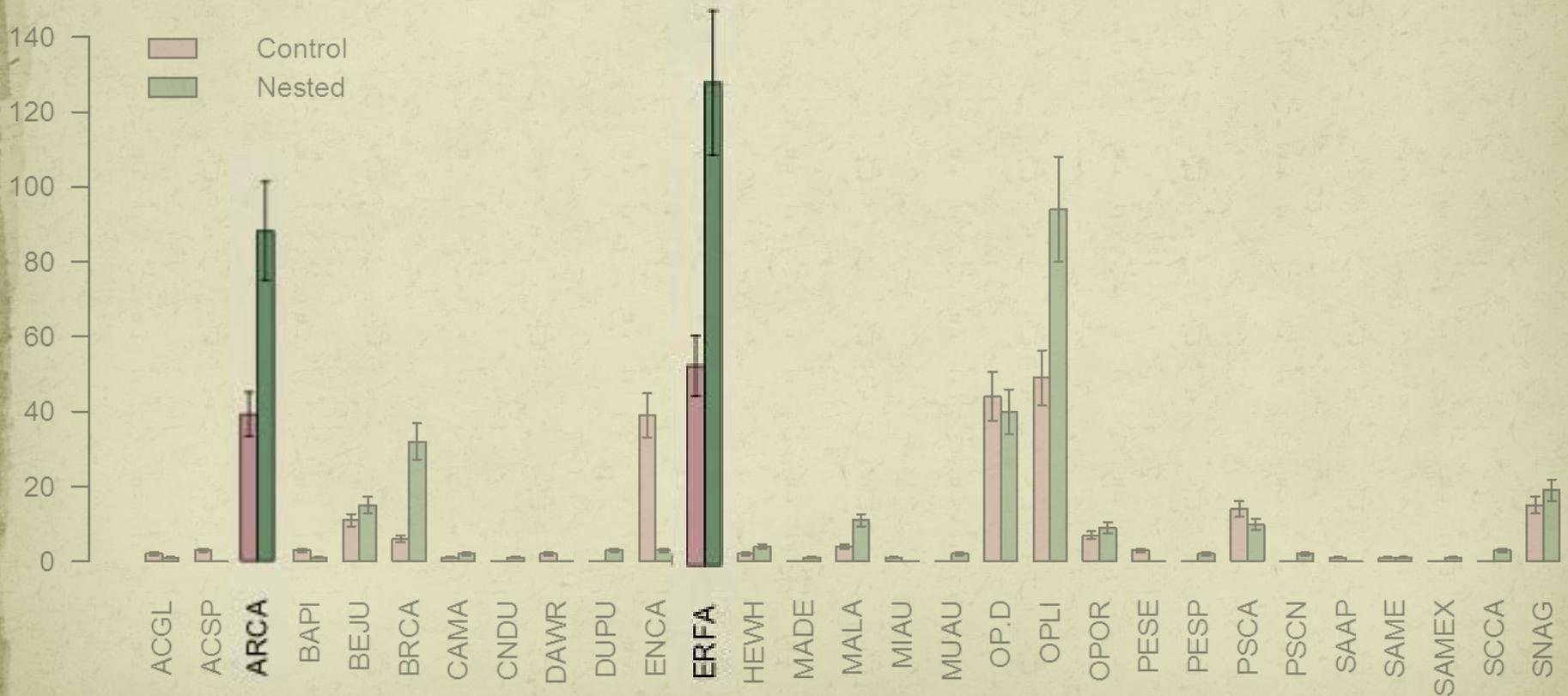
ZAP, log-link:  $Z=2.124$ ,  $p=0.034$

# Species frequencies differ at nested and un-nested sites



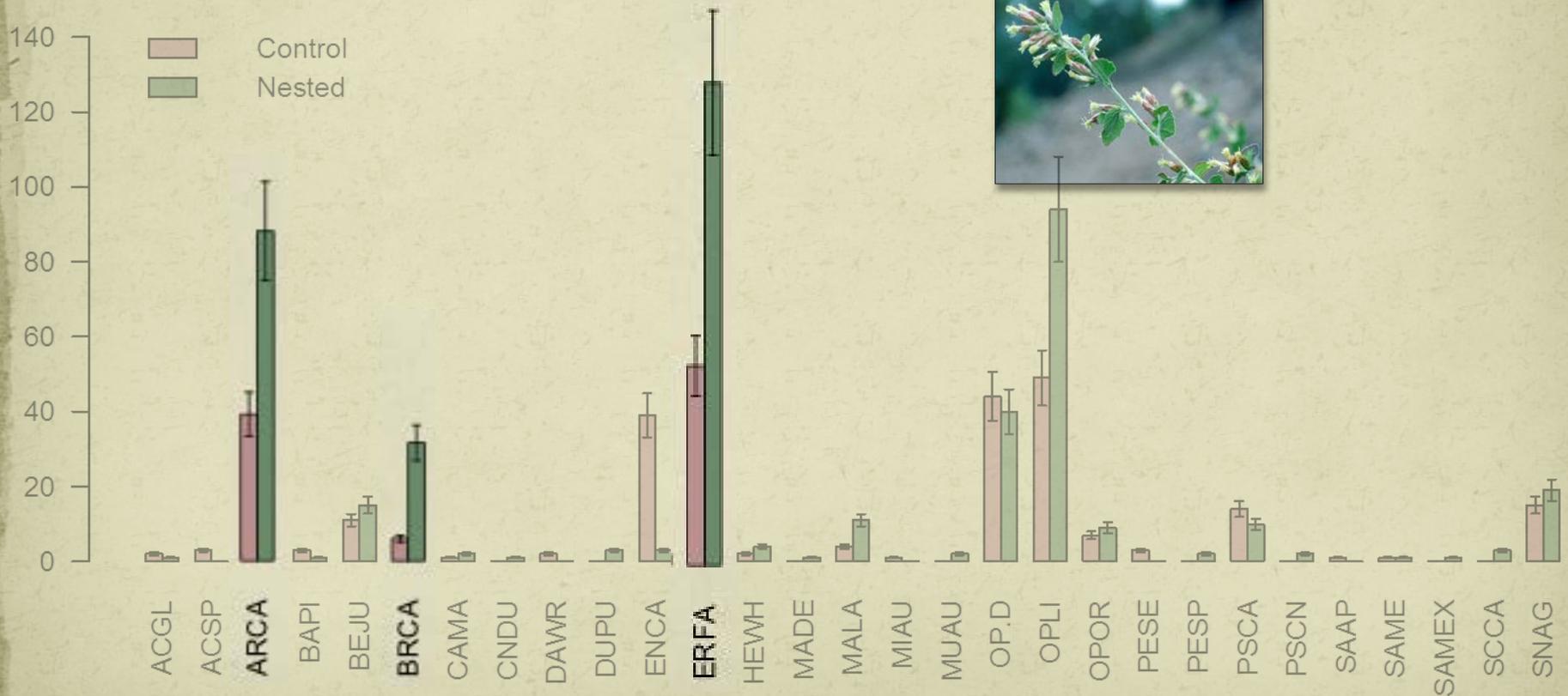
ZAP, log-link:  $Z=2.124$ ,  $p=0.034$

# Species frequencies differ at nested and un-nested sites



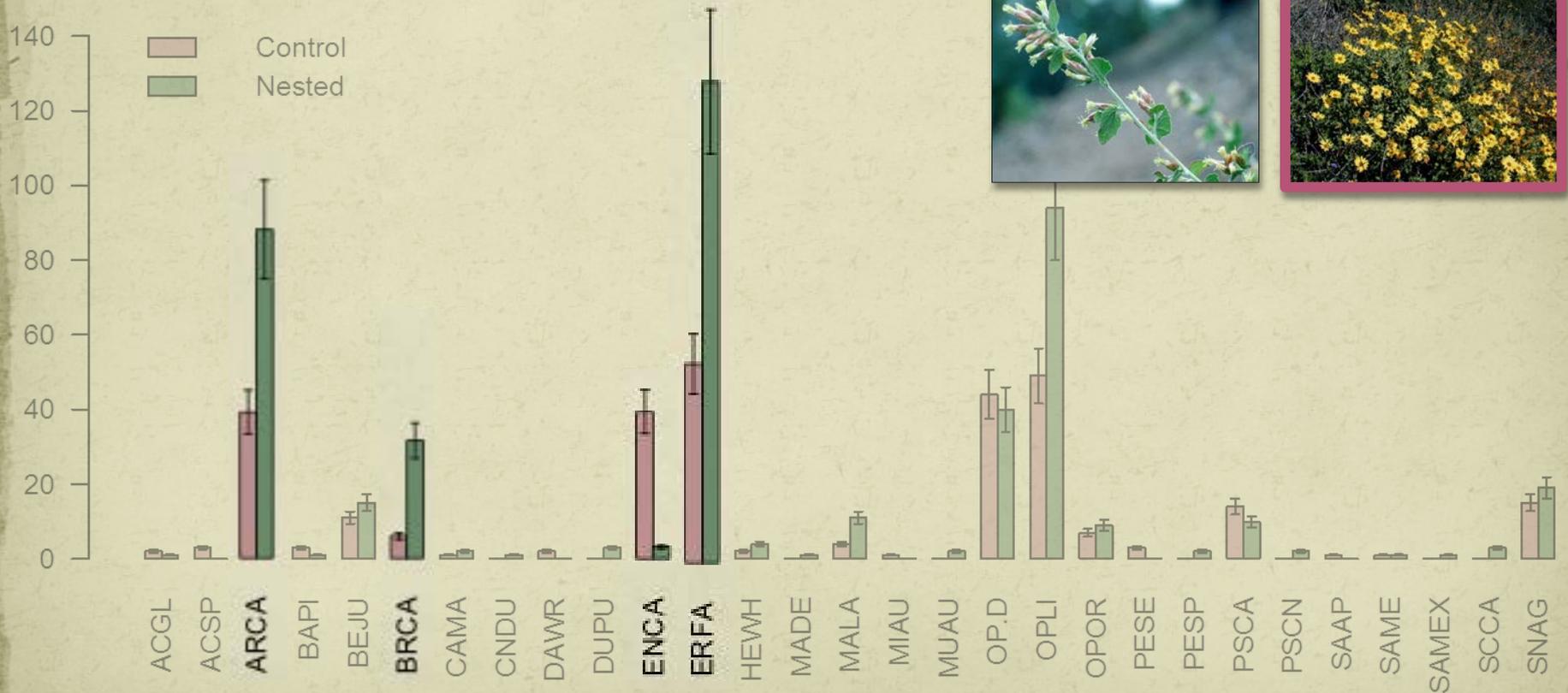
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ZAP, log-link: Z=2.124, p=0.034

# Wrens build a safe height above surrounding vegetation



Mean Height from Resident Cactus

Mean Height from Resident Cactus



Shrub

Shrub

Shrub

Anova:  $F_{(1,28)}=4.66, p=0.03$

# Elderberry and Laurel Sumac: interchangeable refuge?

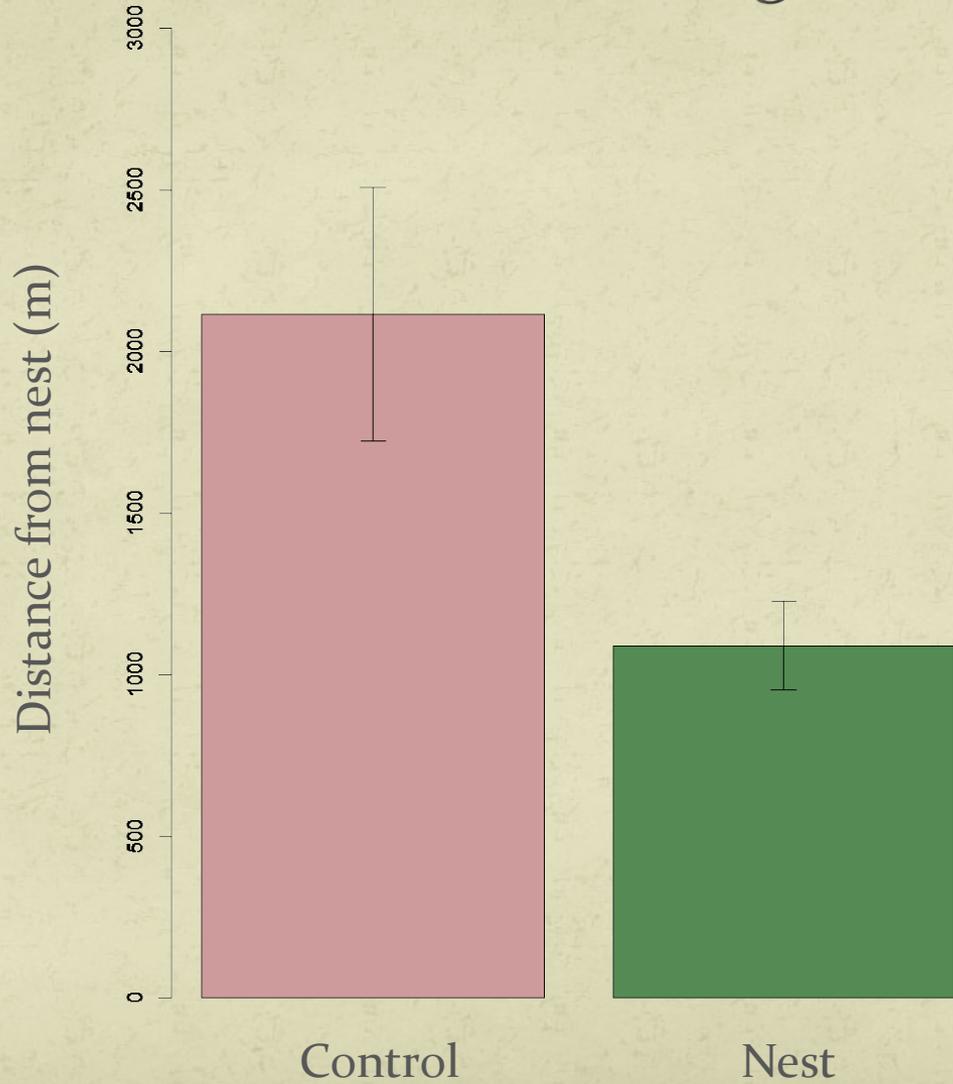


Photo Credit: Rosa Chung

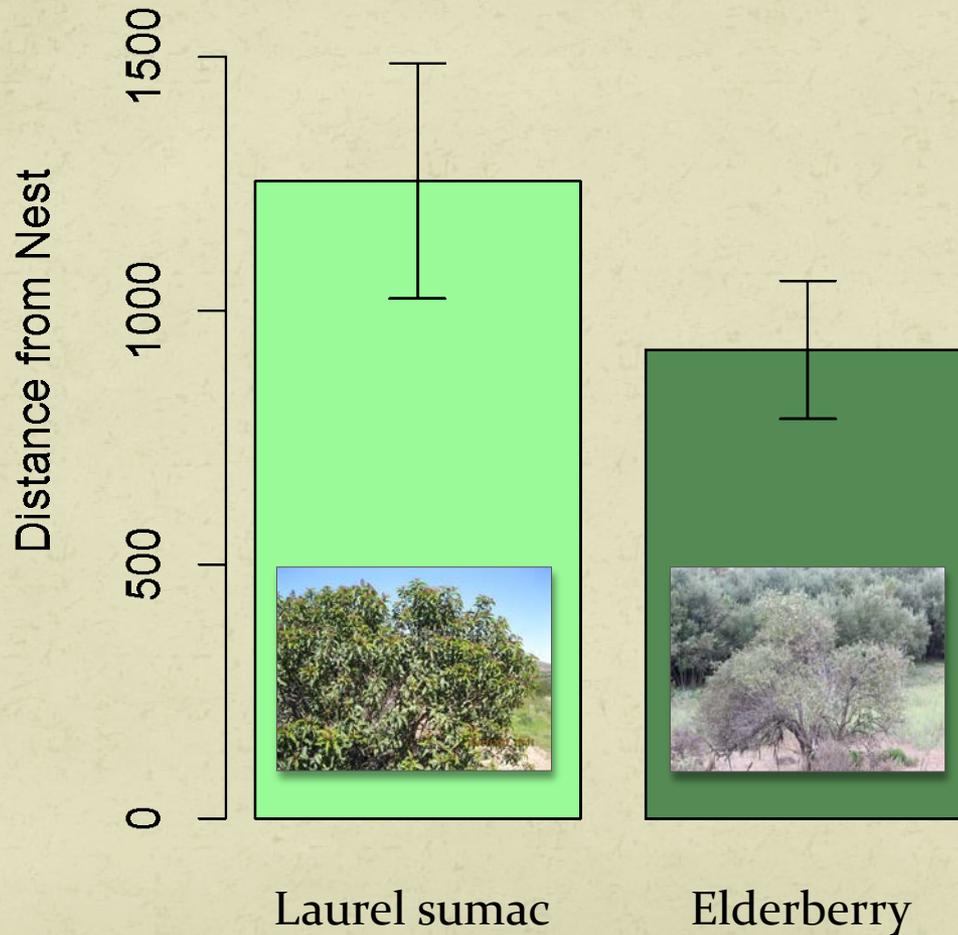


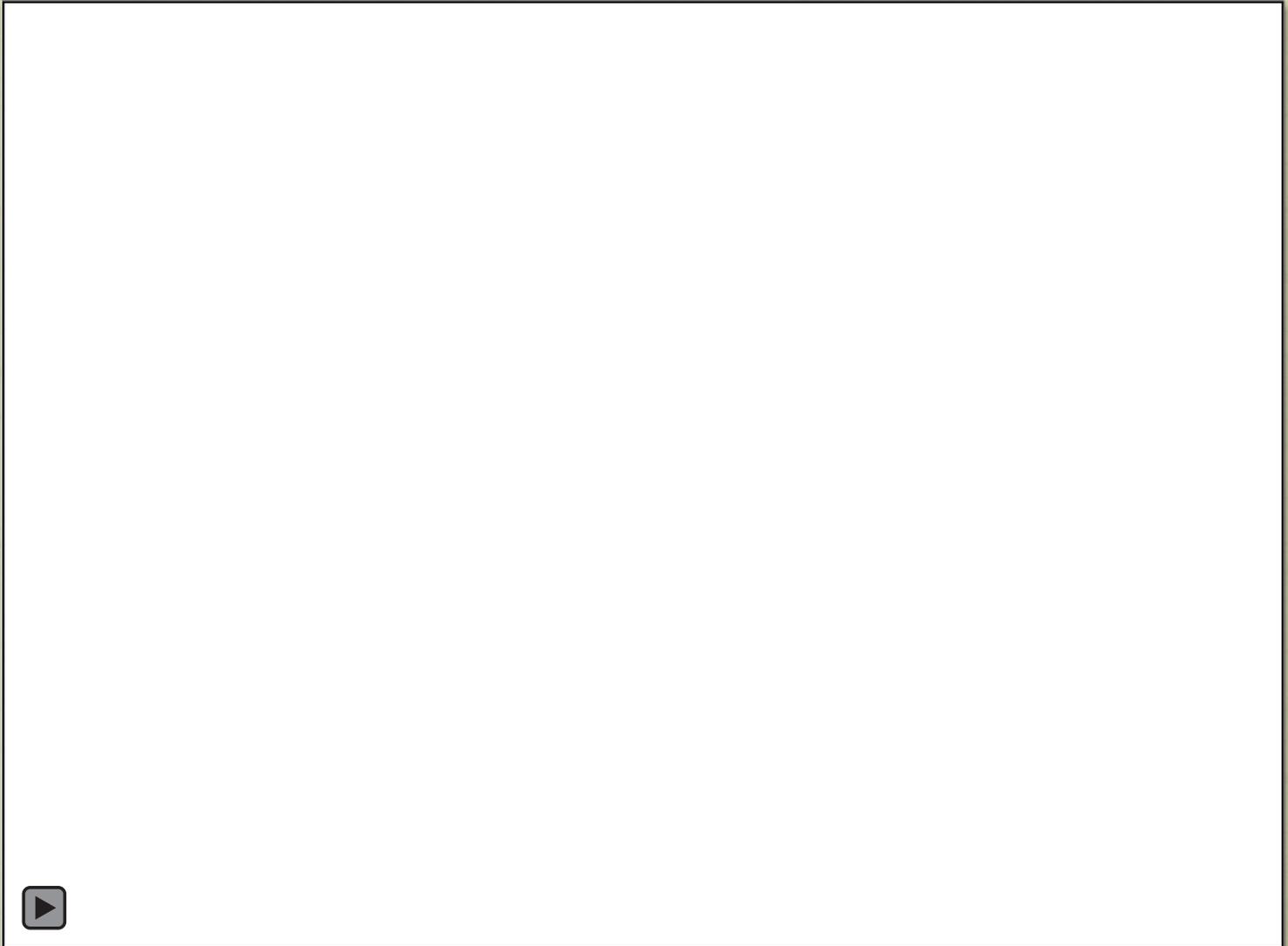
Photo Credit: Ryan Brown

# Elderberry and Laurel Sumac: interchangeable refuge?



# Elderberry and Laurel Sumac: interchangeable refuge?





# Main conclusions

- Tall cacti within a large cactus patch afford maximum protection from predators
- Some shrub species are more common near nests, other species are avoided
- Refuge species often in close proximity

# Restoration considerations

- Ensure that favored shrubs are planted and managed to maintain preferred heights
- Control grass cover to provide bare ground for foraging
- Not limited to sites containing Elderberry as a refuge, utilize Laurel Sumac as a potential alternative
- Regional habitat preferences need consideration