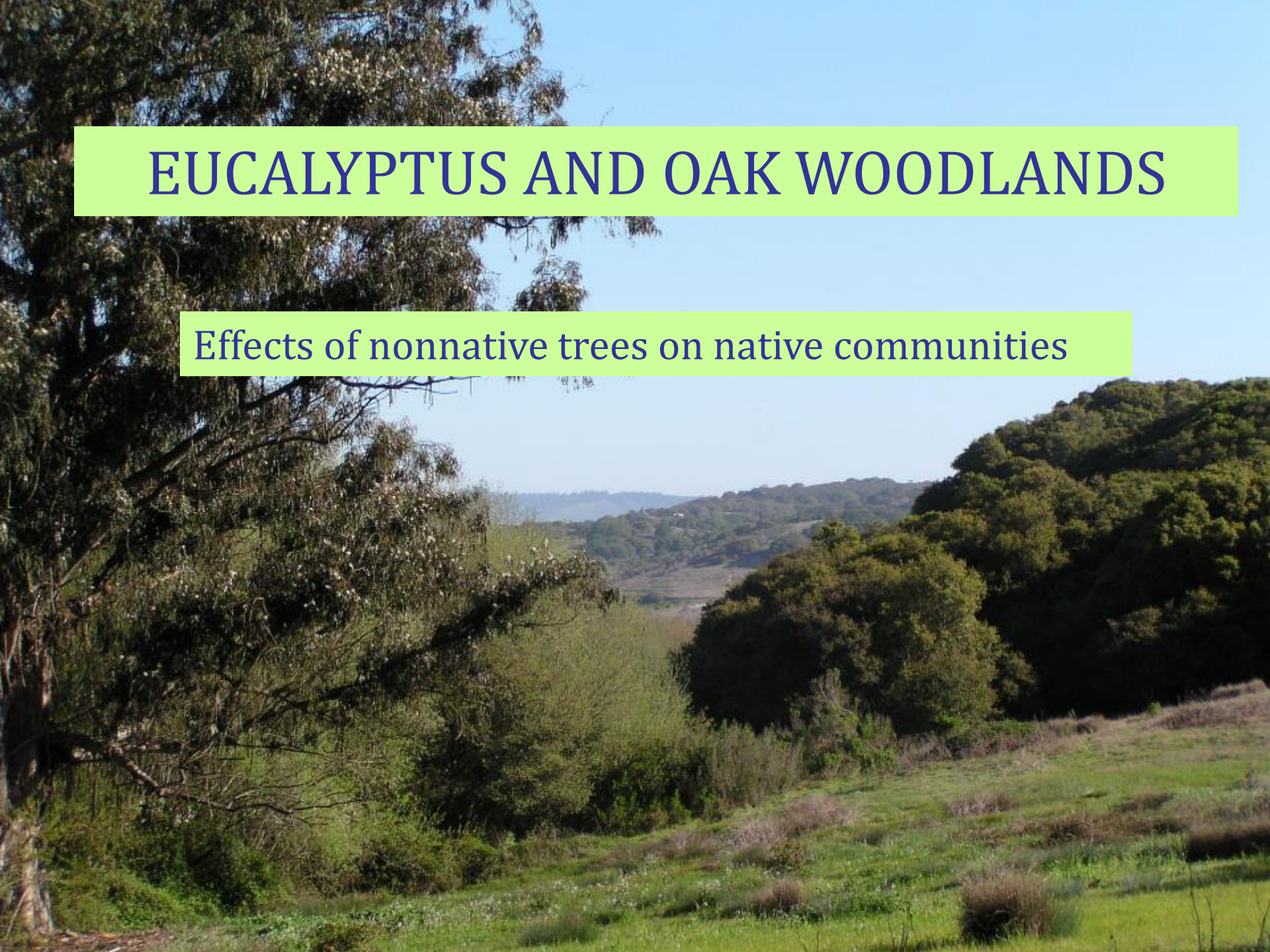


EUCALYPTUS AND OAK WOODLANDS

Effects of nonnative trees on native communities



Why do we care about eucalyptus?

- Non-native and widespread
- Groves tend to spread
- Fire hazard
- High water usage
- Deep litter layer

Ecological effects?



Previous research on eucalyptus vs native woodlands



Same number of arthropod species but different kinds (Sax 2002)

Previous research on eucalyptus vs native woodlands



Eucalyptus groves had fewer species of birds and plants (Keane and Morrison 1990)

Previous research on eucalyptus vs native woodlands



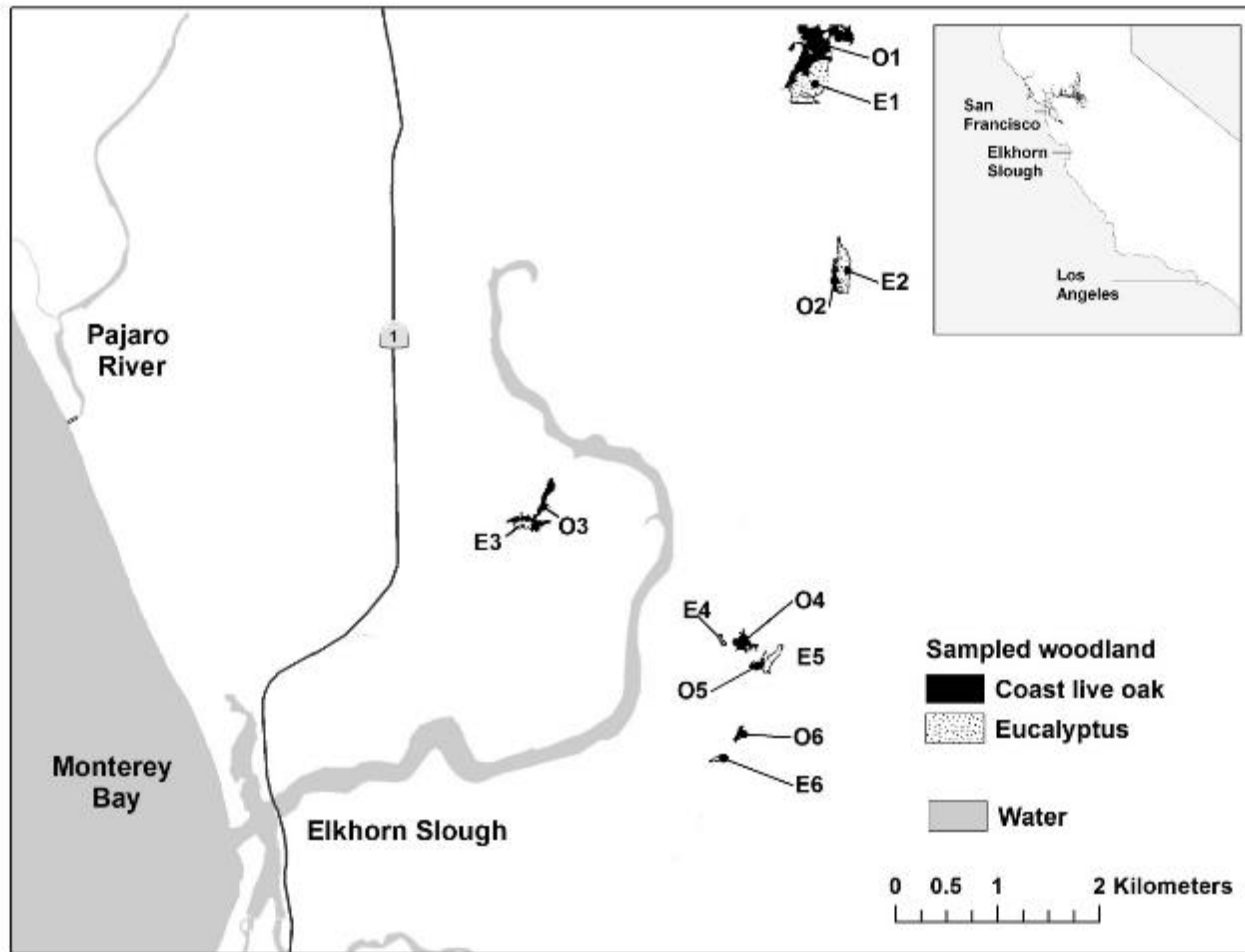
Salamanders were more abundant in eucalyptus!
(Keane and Morrison 1990)

Objectives of study



- Have planted eucalyptus groves increased in size over the past decades?
- Compare the biological assemblages of eucalyptus to oak woodlands

Study sites



Tree species



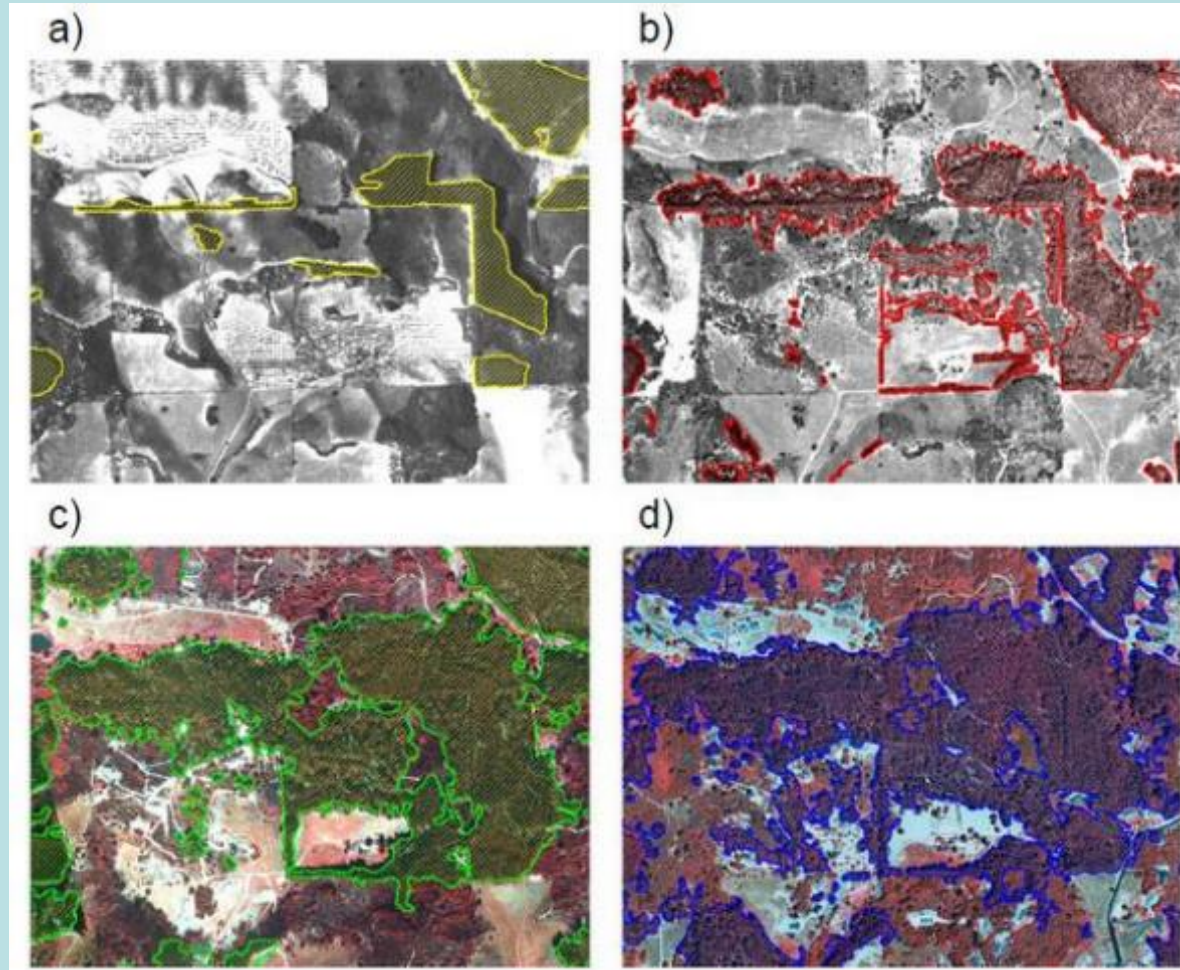
Tasmanian blue gum
(*Eucalyptus globulus*)



Coastal live oak
(*Quercus agrifolia*)

Expansion of eucalyptus groves

Time-series analysis



Planted eucalyptus groves increased 271% in size, on average, (1931-2001)

Biological assemblages

Eucalyptus vs oak



Are eucalyptus species-poor habitats compared to oaks?



Characterized taxonomic groups



Field methods-Plants



I identified plants along transects in understory

Field methods-Birds



Field methods- Amphibians



Field methods-Arthropods



Pitfall traps and other methods

Results

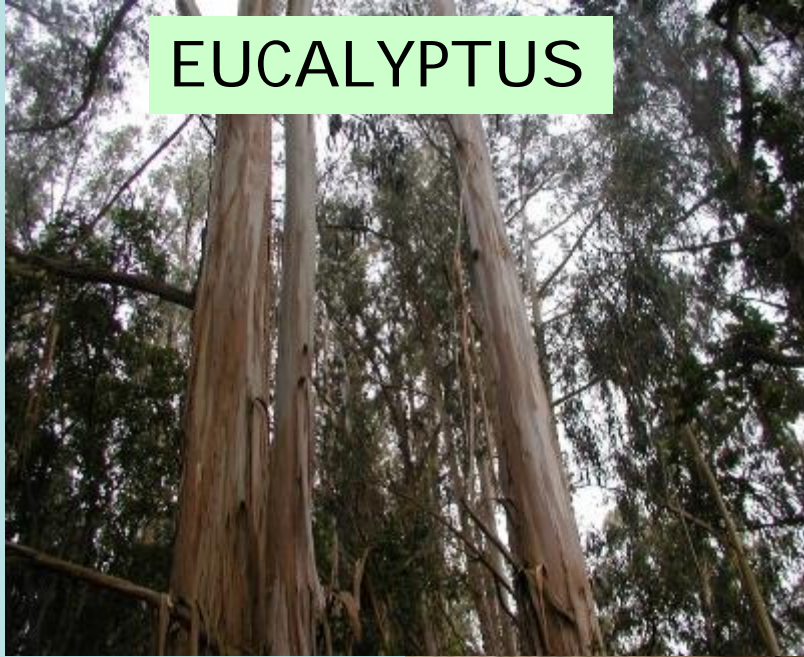


Differences between nonnative and native woodlands depended on the species assemblage

Results

Different arthropod communities

EUCALYPTUS



Fewer arthropod species

OAK



Results

EUCALYPTUS



Lower cover by perennial plants

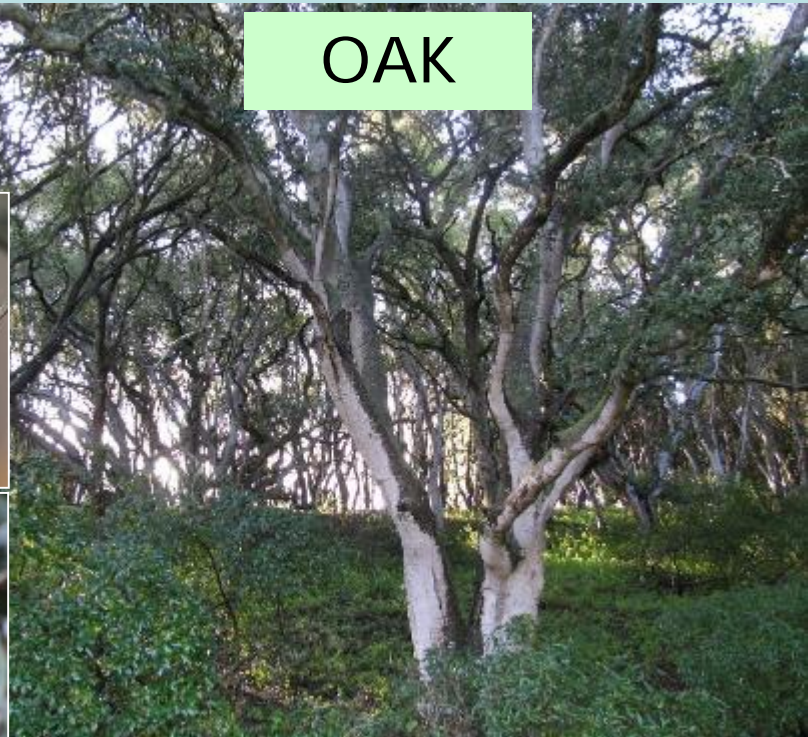
Lower abundance of:
-amphibians
-endemic understory plants

Results

Similar bird communities

EUCALYPTUS

OAK



Results

Site variation



“Plantation” vs mature stands of eucalyptus

Restoration and habitat value of Eucalyptus?



Eucalyptus-species poor habitats?

Birds? Amphibians? Endemic plants?





Contact info

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