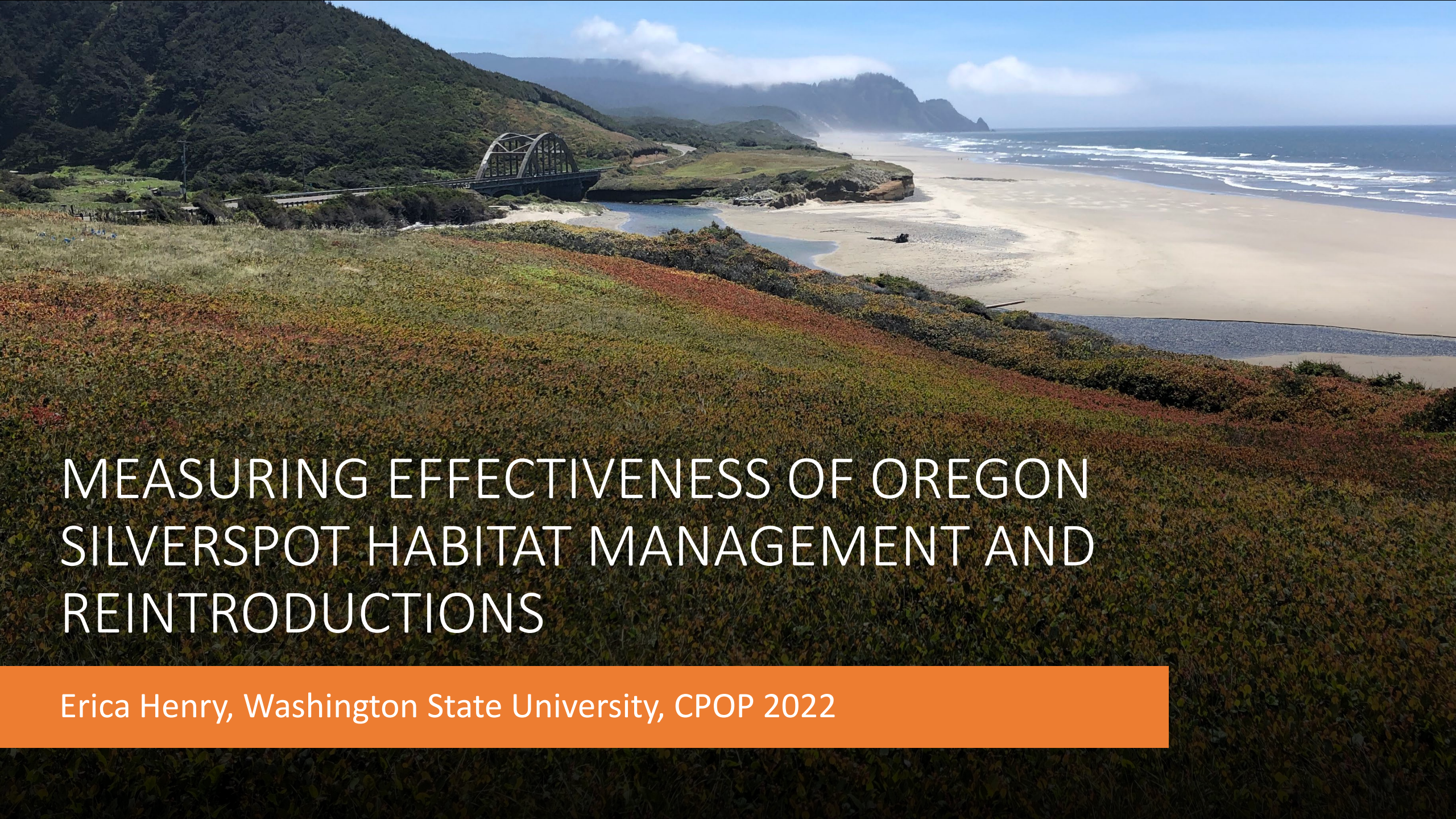




MEASURING EFFECTIVENESS OF OREGON SILVERSPOT HABITAT MANAGEMENT AND REINTRODUCTIONS

Erica Henry, Washington State University, CPOP 2022



Fender's blue (OR)



Oregon silverspot (OR)



Bartram's scrub-hairstreak (FL)



Mardon skipper (WA)



St. Francis' satyr (NC)

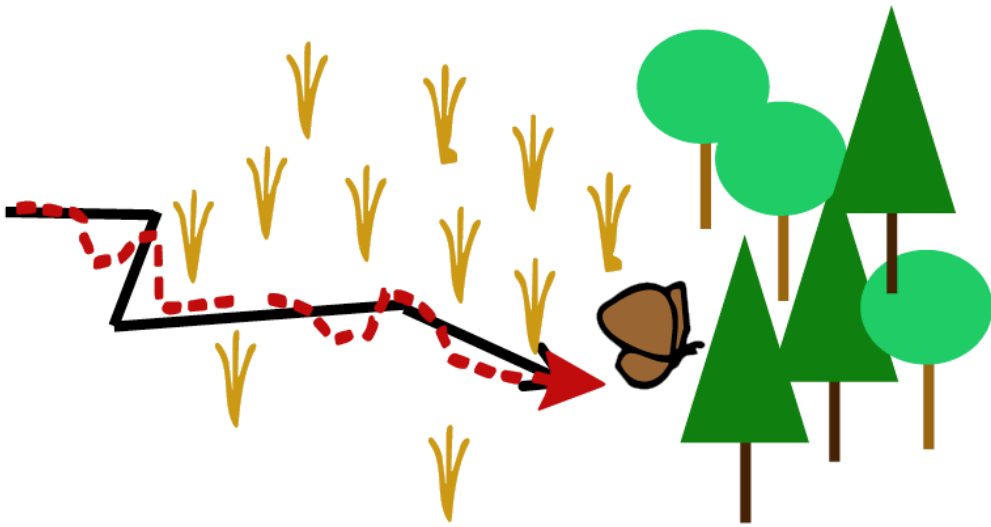




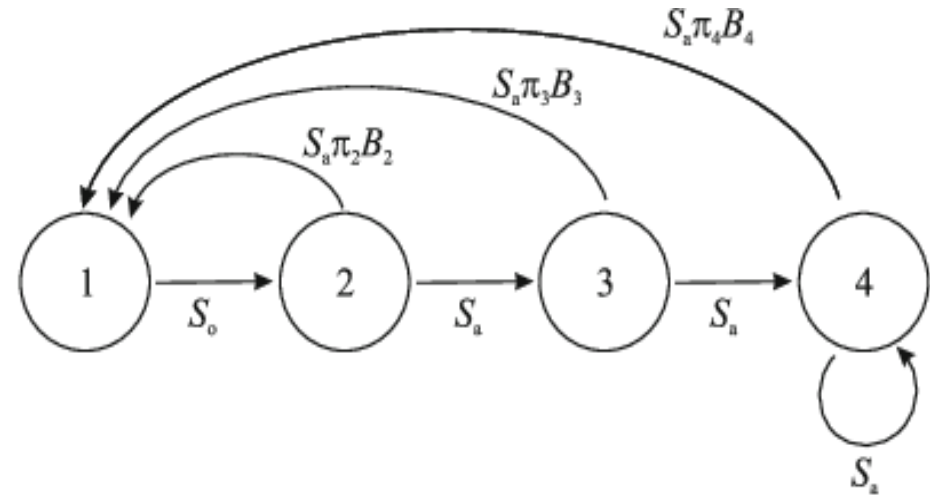
Photo: Sam Derrenbacher

Mechanisms are key!

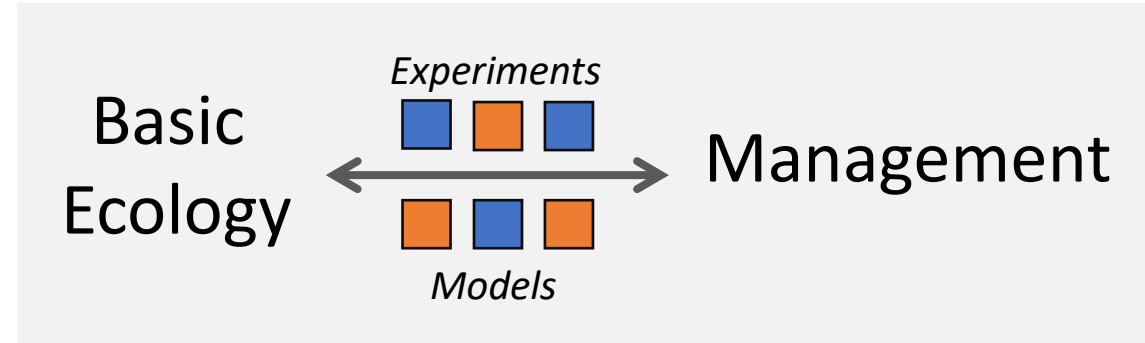
Movement



Demography



Adaptive management framework



Disturbance-based management



Reintroductions

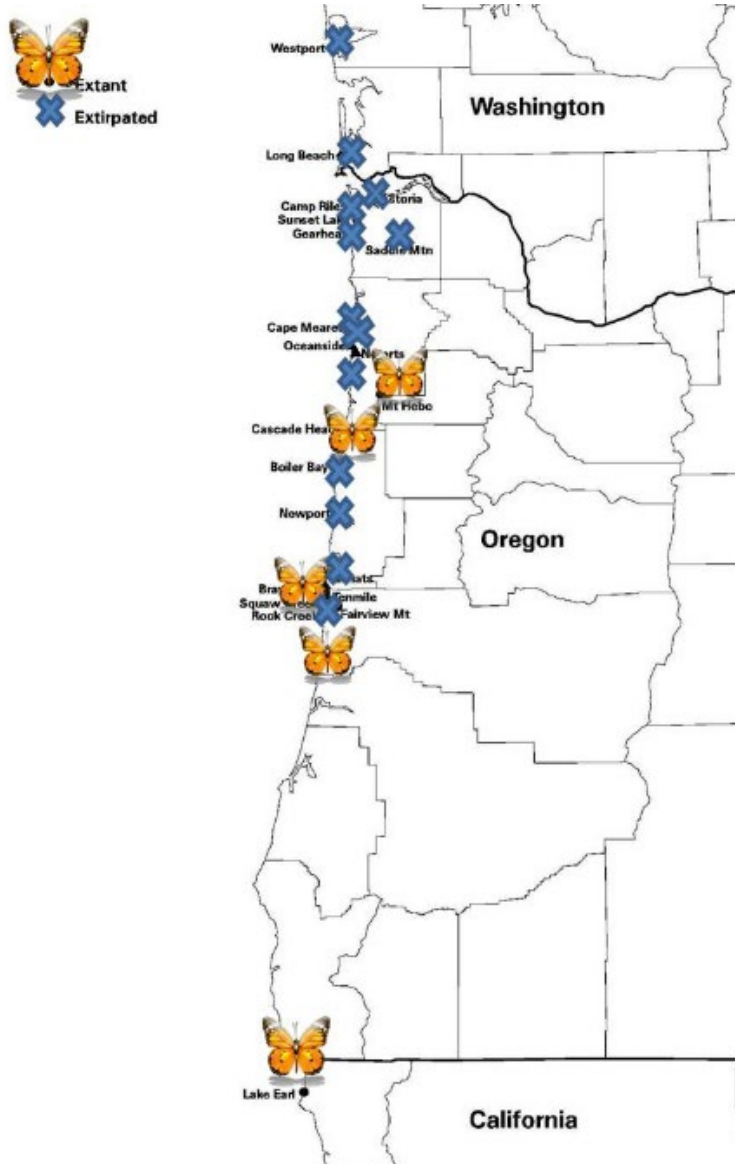




Photo: Julia Johonos



Only a few populations





Does thatch removal
increase larval survival?



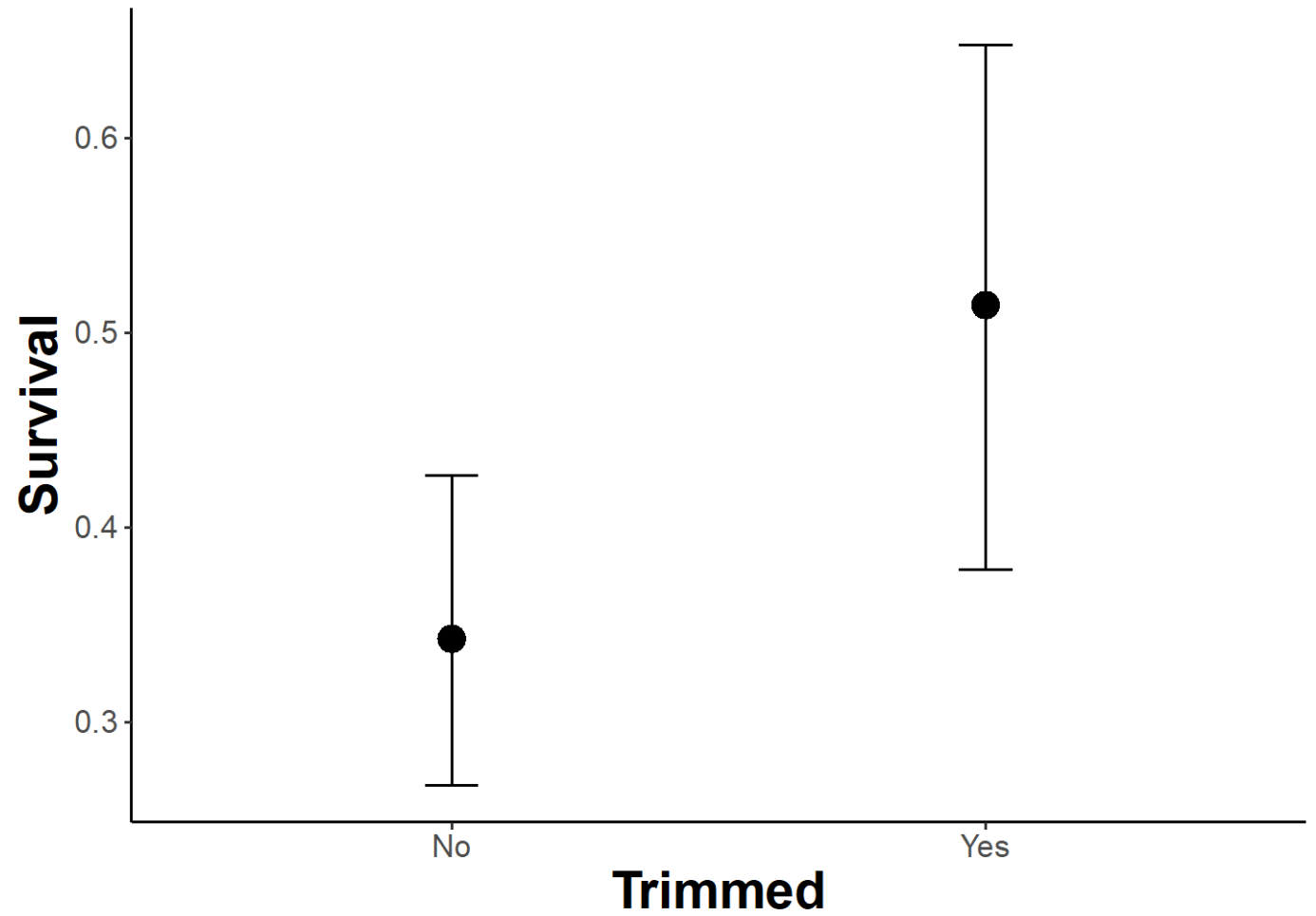


Photo: Samantha Derrenbacher





Higher survival in cleared plots



Are wild and
captive-reared
butterflies doing
the same
things?



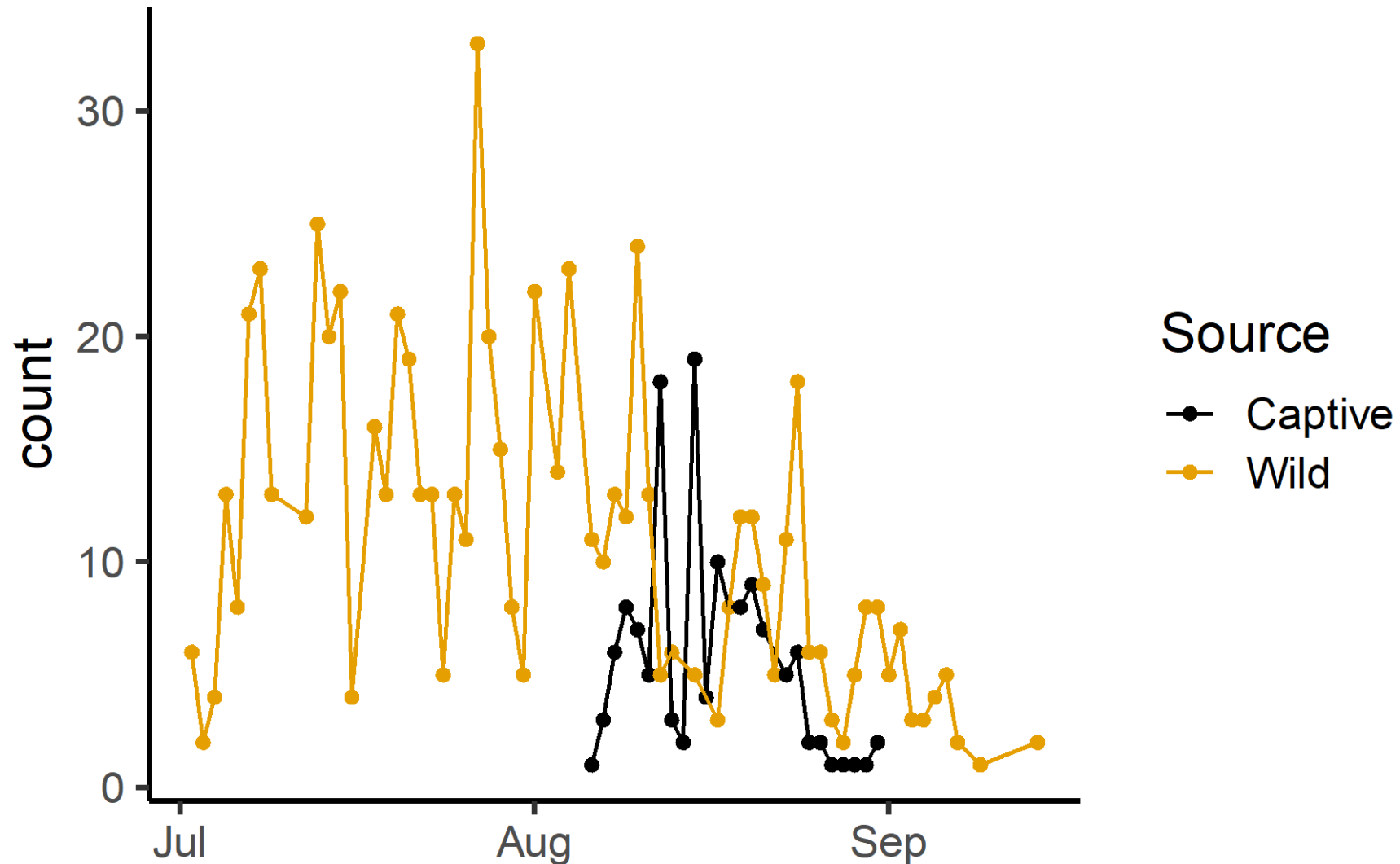


Mark as
many wild
butterflies
as
possible

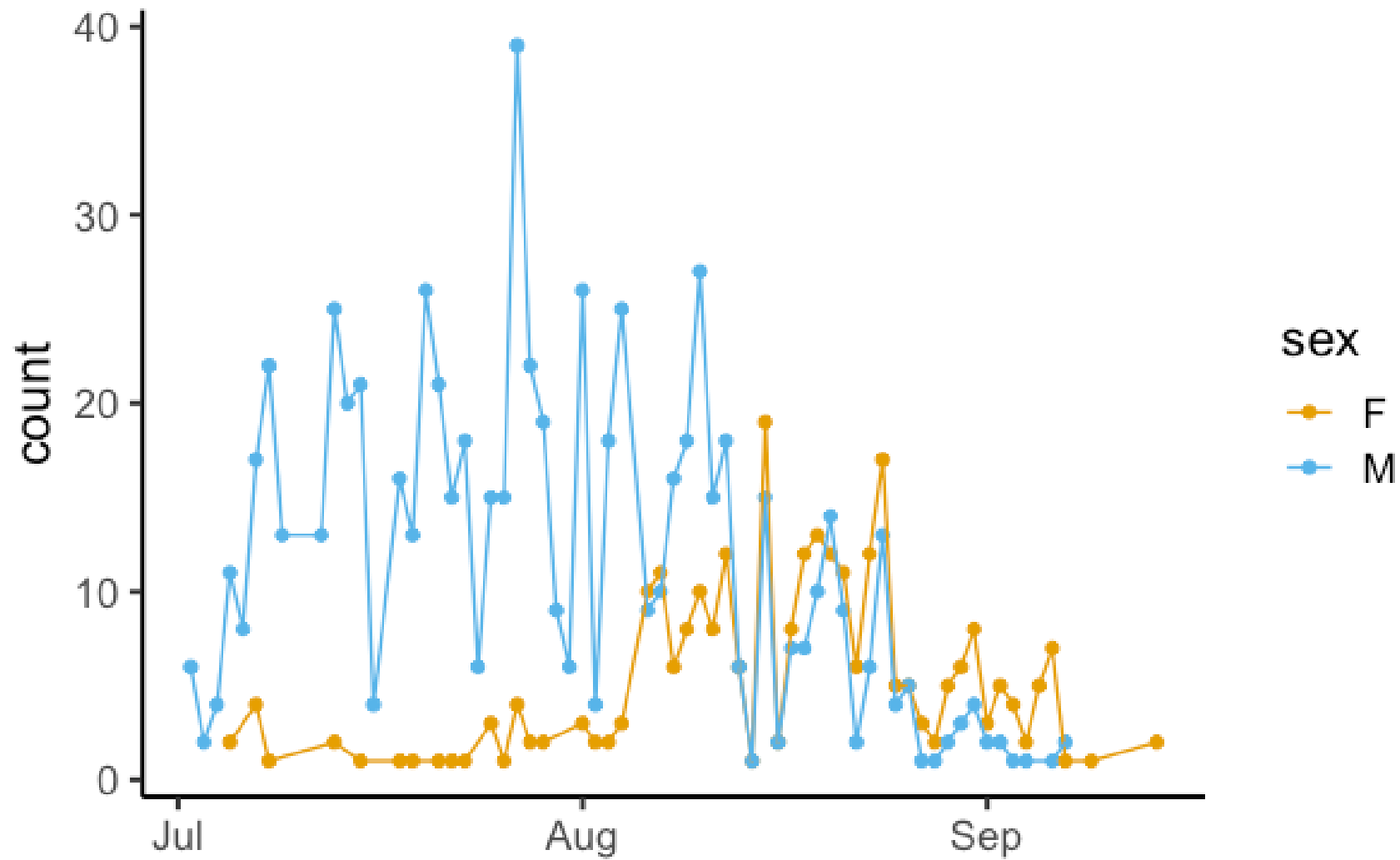
Release pupae in late-July/early August



Wild butterflies emerged WAY earlier than captive releases were planned



Reproductive diapause?



Key differences between wild and captive butterflies



Sex	Source	Apparent lifespan	Proportion laying eggs
M	Wild	16	
F	Wild	24	0.46
M	Tent	12	
F	Tent	18	0.16
M	Pupa	5	
F	Pupa	7	0.13

*Longest lived butterfly was female that lived 9 weeks!

Key differences between wild and captive butterflies



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All detections



Females



Males



Wild butterflies

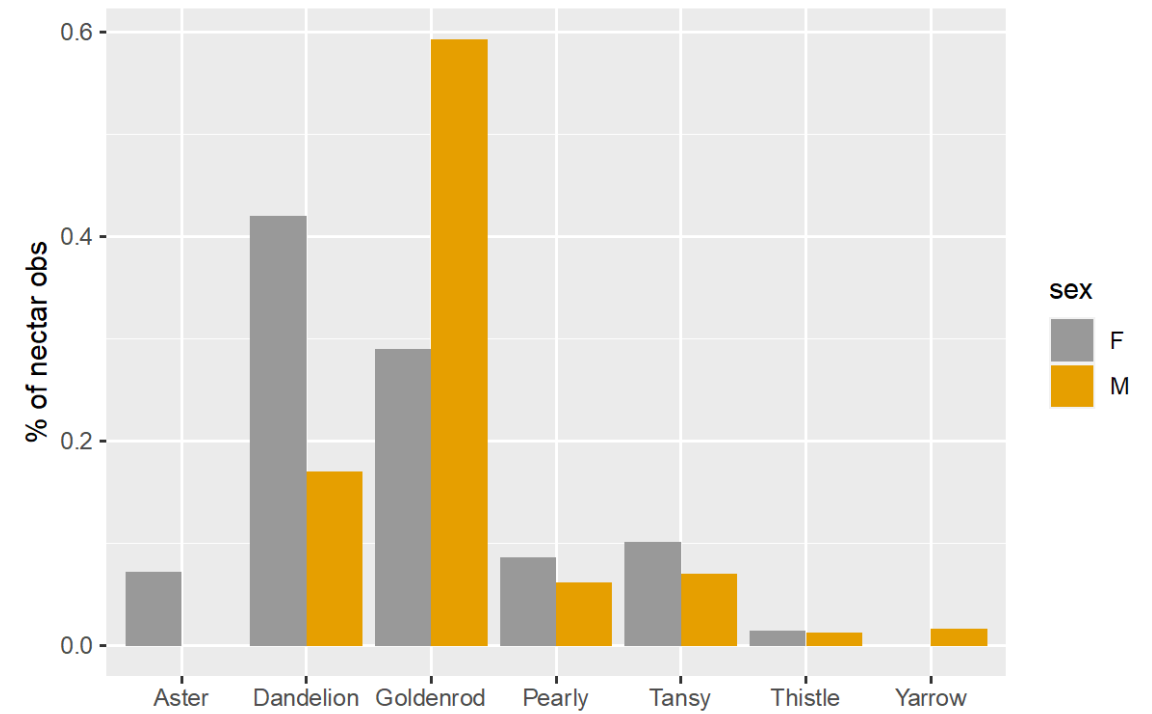
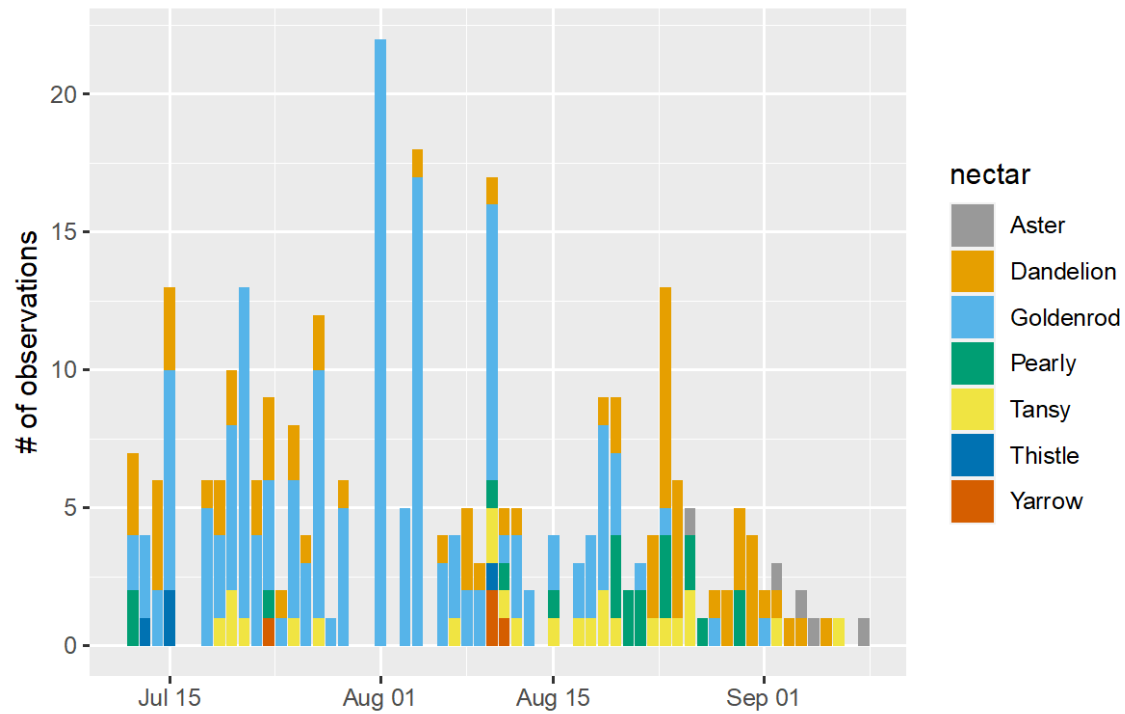


Tent releases



Pupal releases

Nectar use follows nectar phenology



So many new questions....



Recovery Challenge Grant Objectives

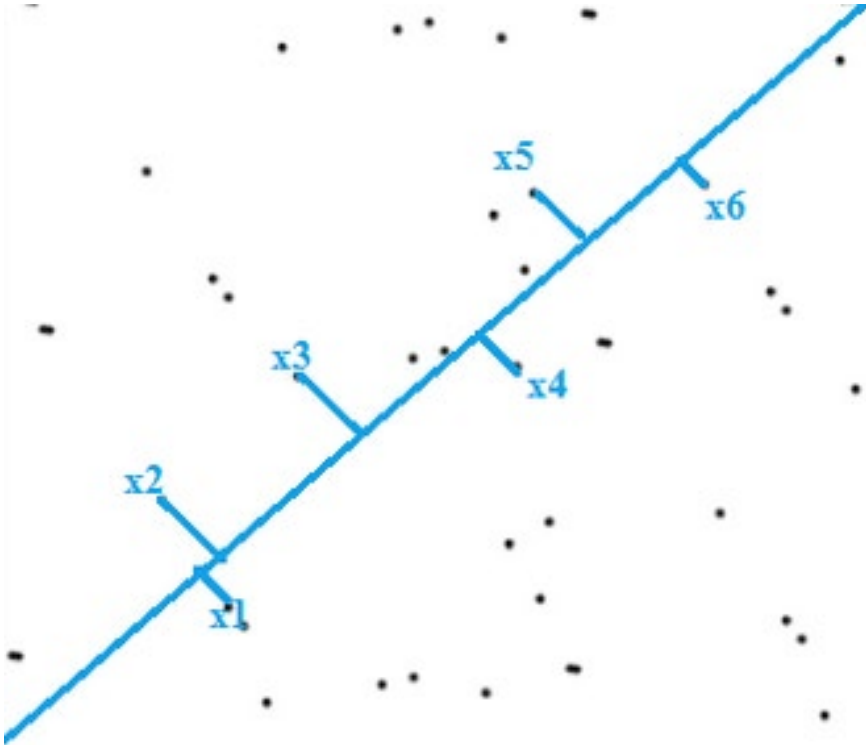
A) Population size and
metapopulation dynamics

B) Population response to habitat
management



A) Population size and metapopulation dynamics

Distance Sampling



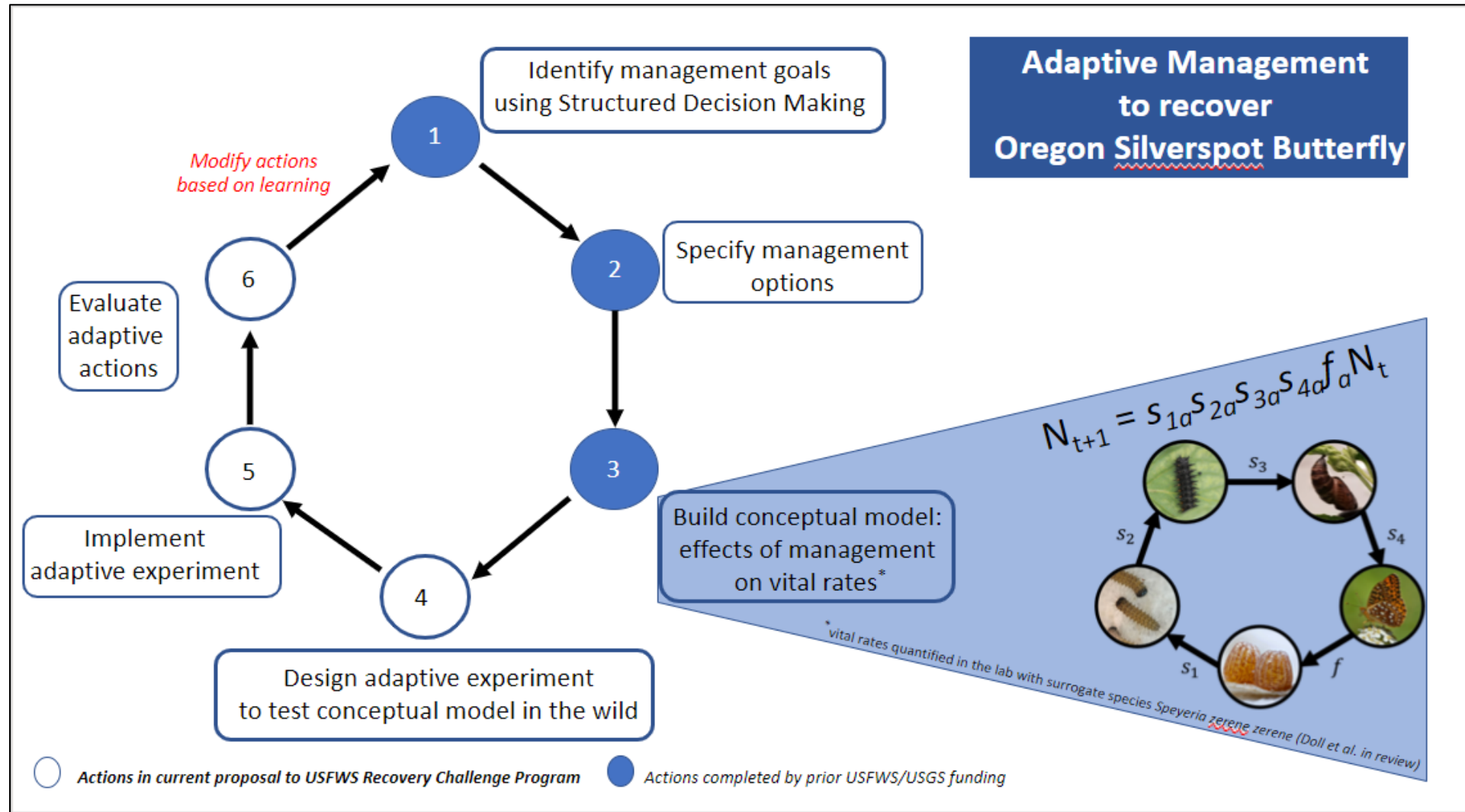
All sites each year

Mark-recapture



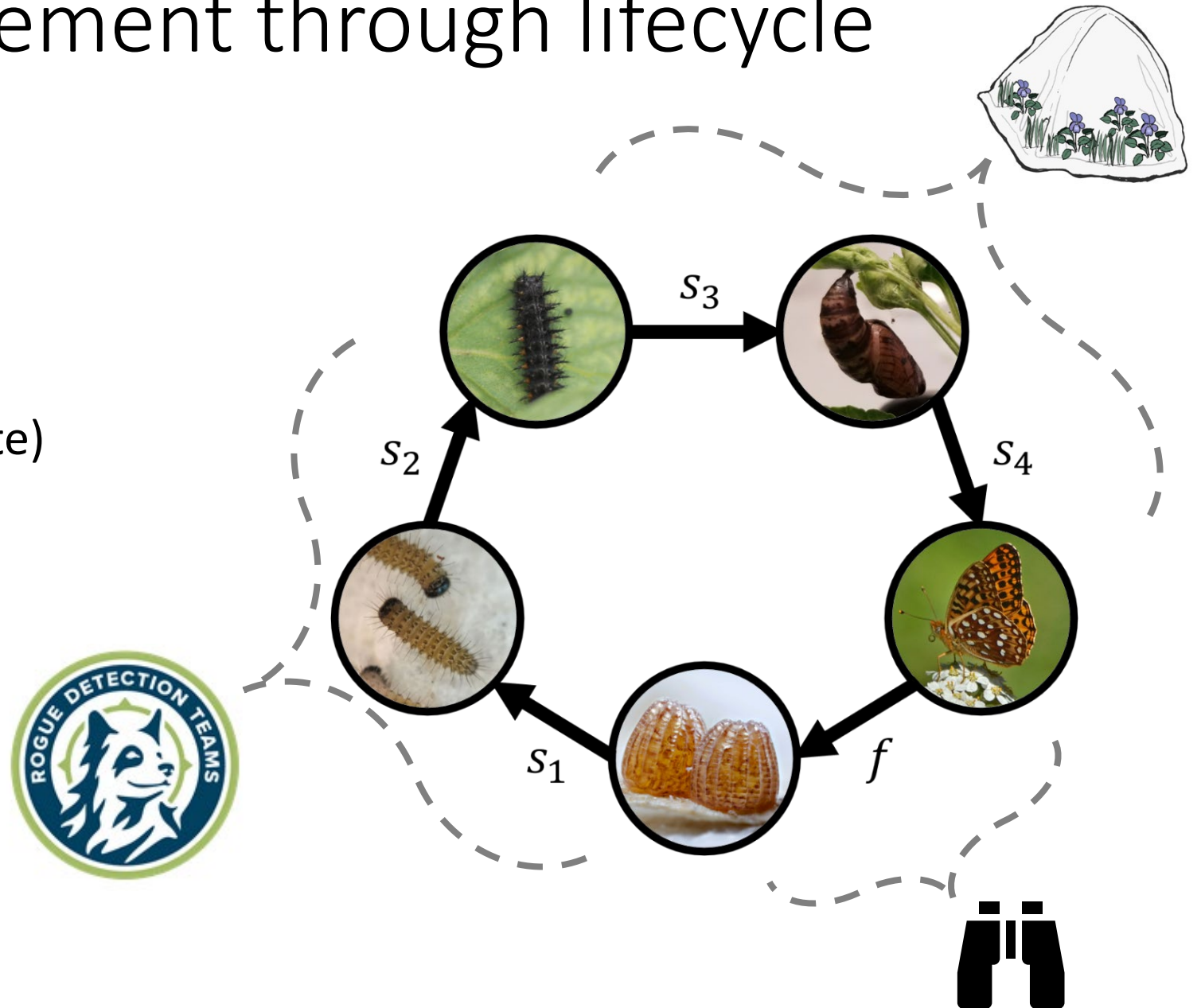
One site per year

B) Population response to habitat management



Effect of management through lifecycle

- Nestucca
 - Single entry burn
 - Double entry burn
 - Low-mow (fire surrogate)
- Rock Creek
 - Low mow three times
 - Low mow once
 - 4" mow



New graduate student
position starts April 2023!
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