

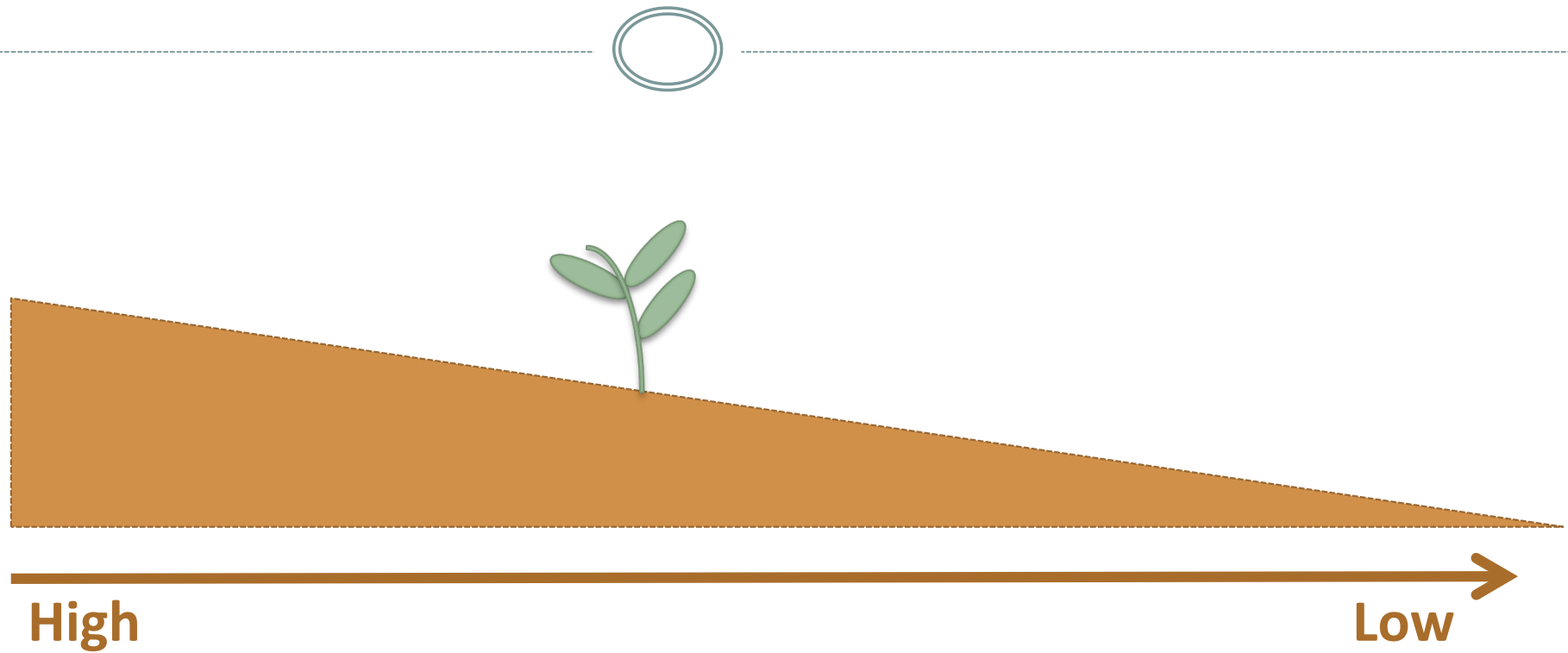
Fire and Flooding Interact to Affect *Croton linearis* Survival in Pine Rocklands of Everglades National Park, Florida

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¹University of Florida ²National Park Service, Everglades National Park

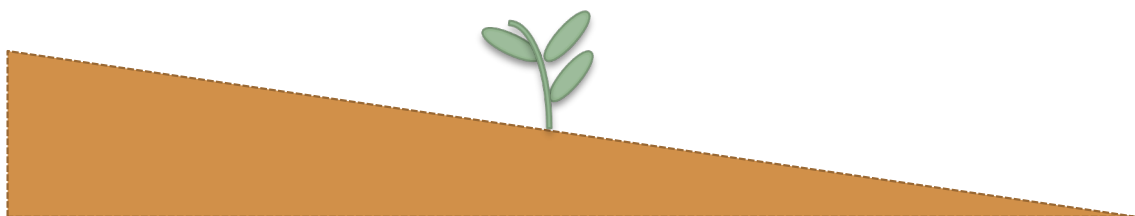
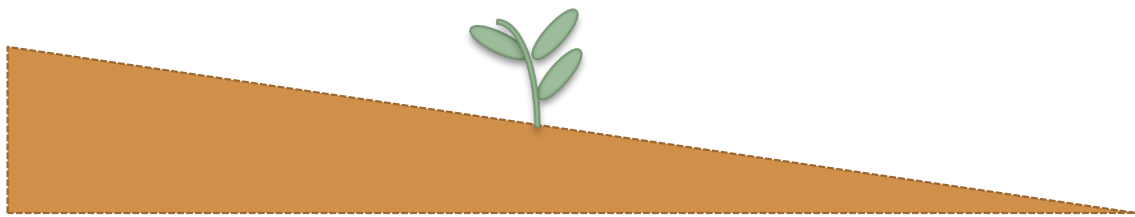
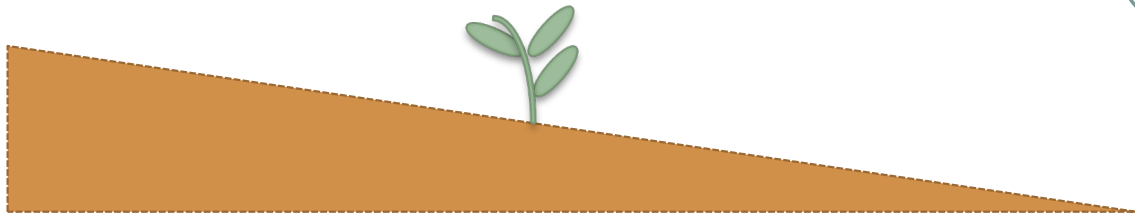
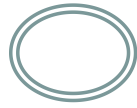


Fire and Water Interact

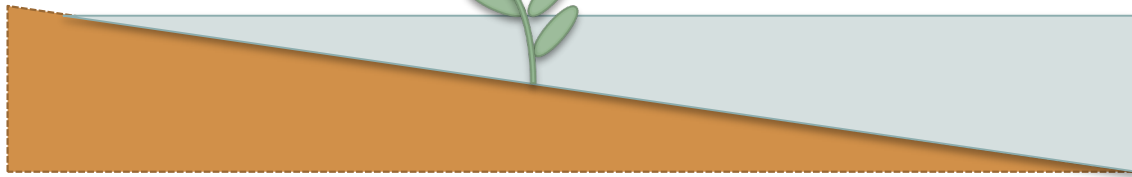
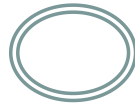


...Along an elevational gradient

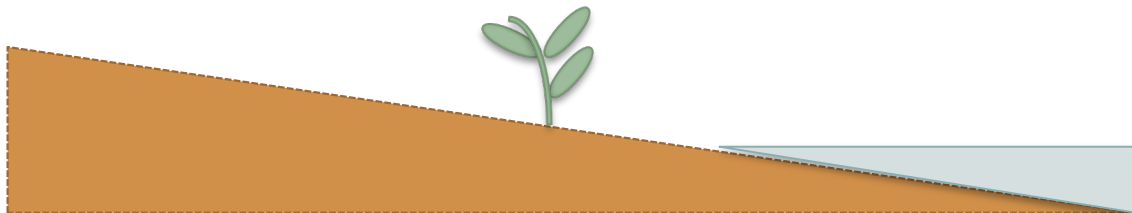
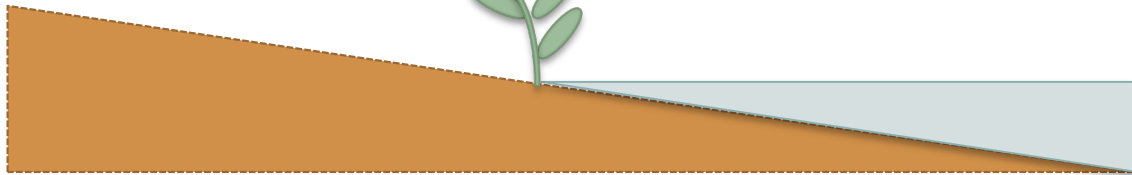
Fire and Water Interact



Fire and Water Interact



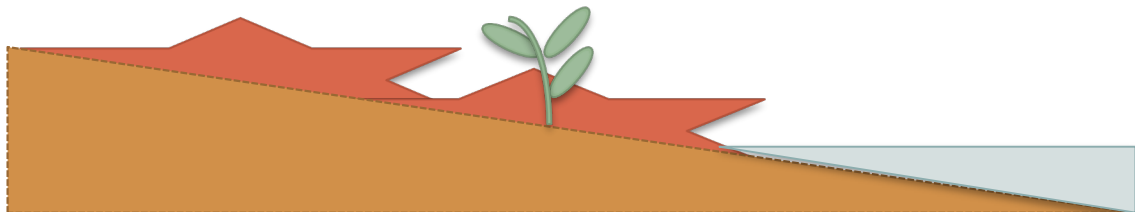
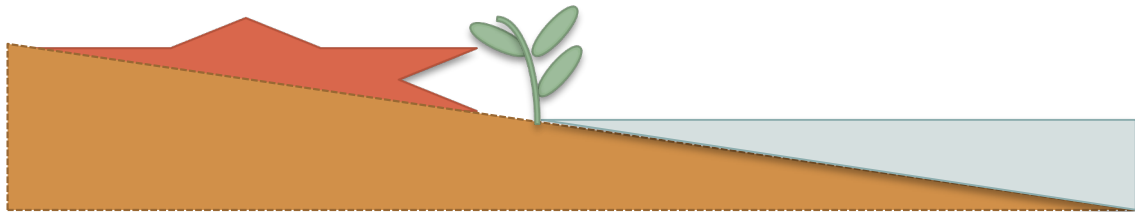
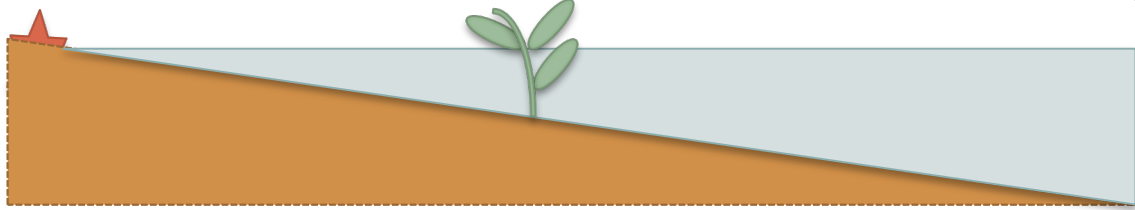
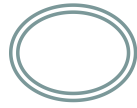
Wet/ Inundated



Dry



Fire and Water Interact



Wet/ Inundated

Dry

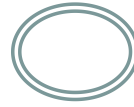


Unburned

Burned



Pine Rocklands – Ecotones of Water and Fire

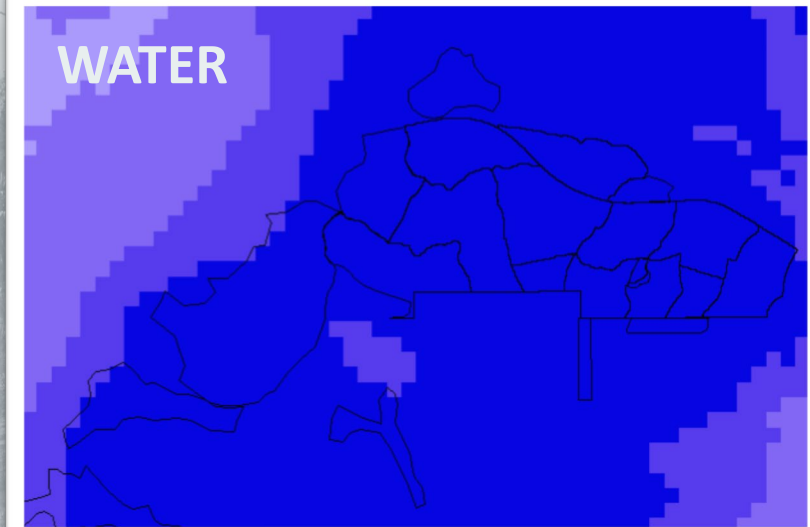
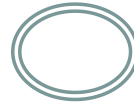


Hydrologic Modifications

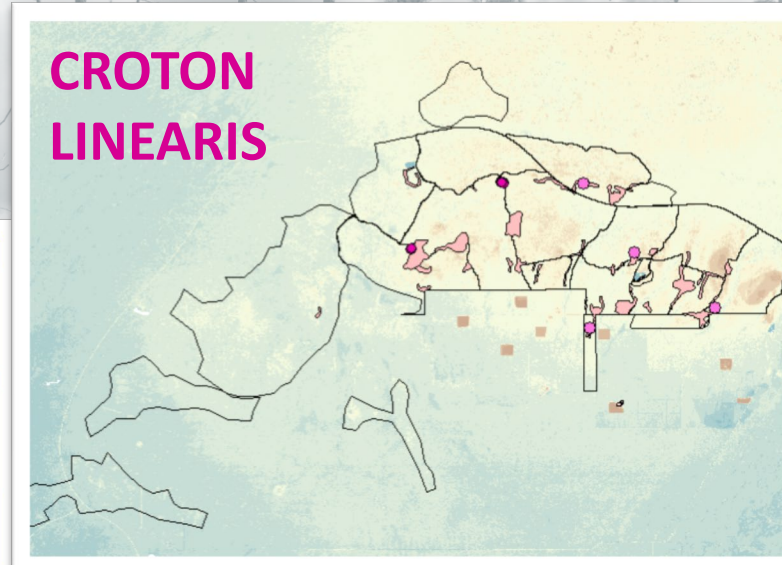
**Plant
Diversity**

Prescribed Burns

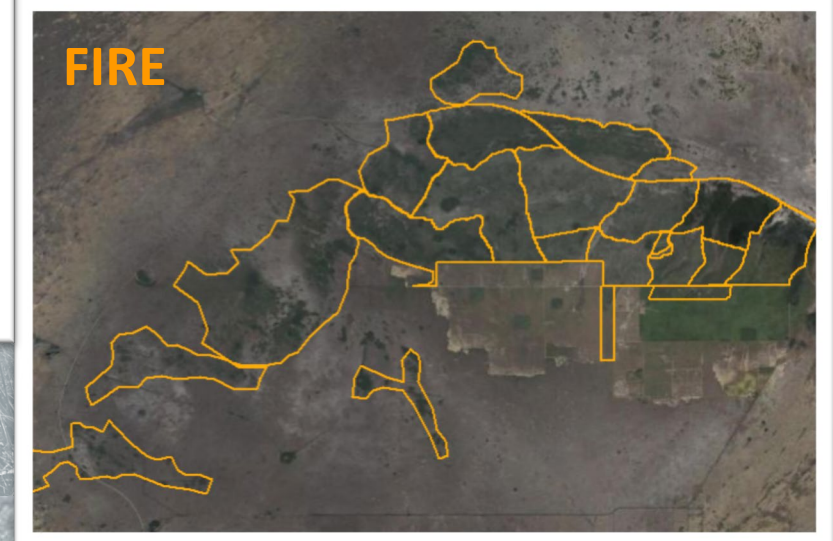
Pine Rocklands – Ecotones of Water and Fire



Hydrologic Modifications



Plant
Diversity



Prescribed Burns

Croton linearis is an essential host plant



Bartram's Hairstreak, *Strymon acis*
Federally endangered
2014 Listed



Florida Leafwing, *Anaea troglodyta*
Federally endangered
2006 Candidate, 2014 Listed
NOT SEEN OUTSIDE OF ENP SINCE 2007

How do fire and hydrology interact to affect survival of *Croton linearis*?



Dry and Wet season burns



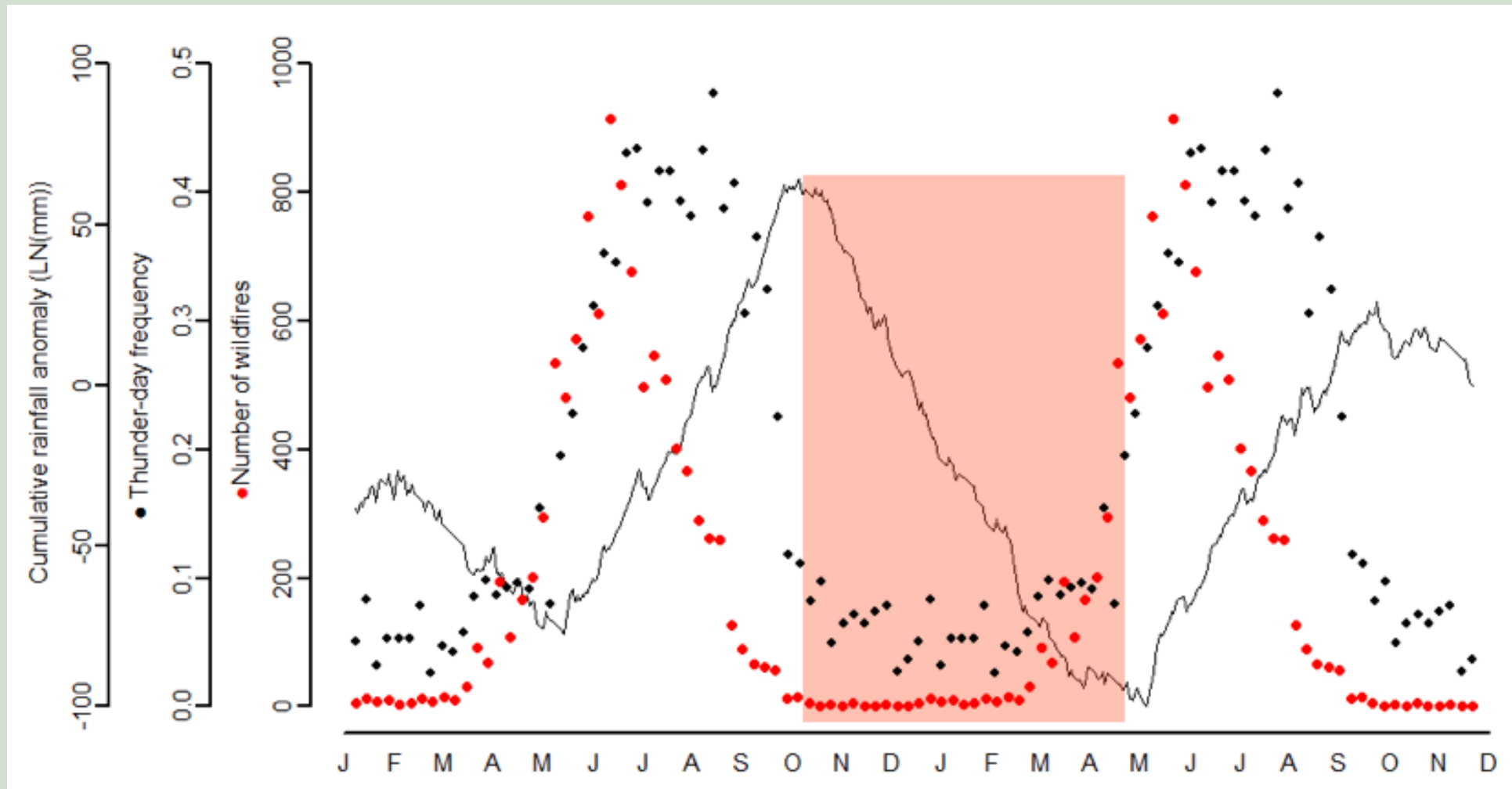
AA water surface elevations



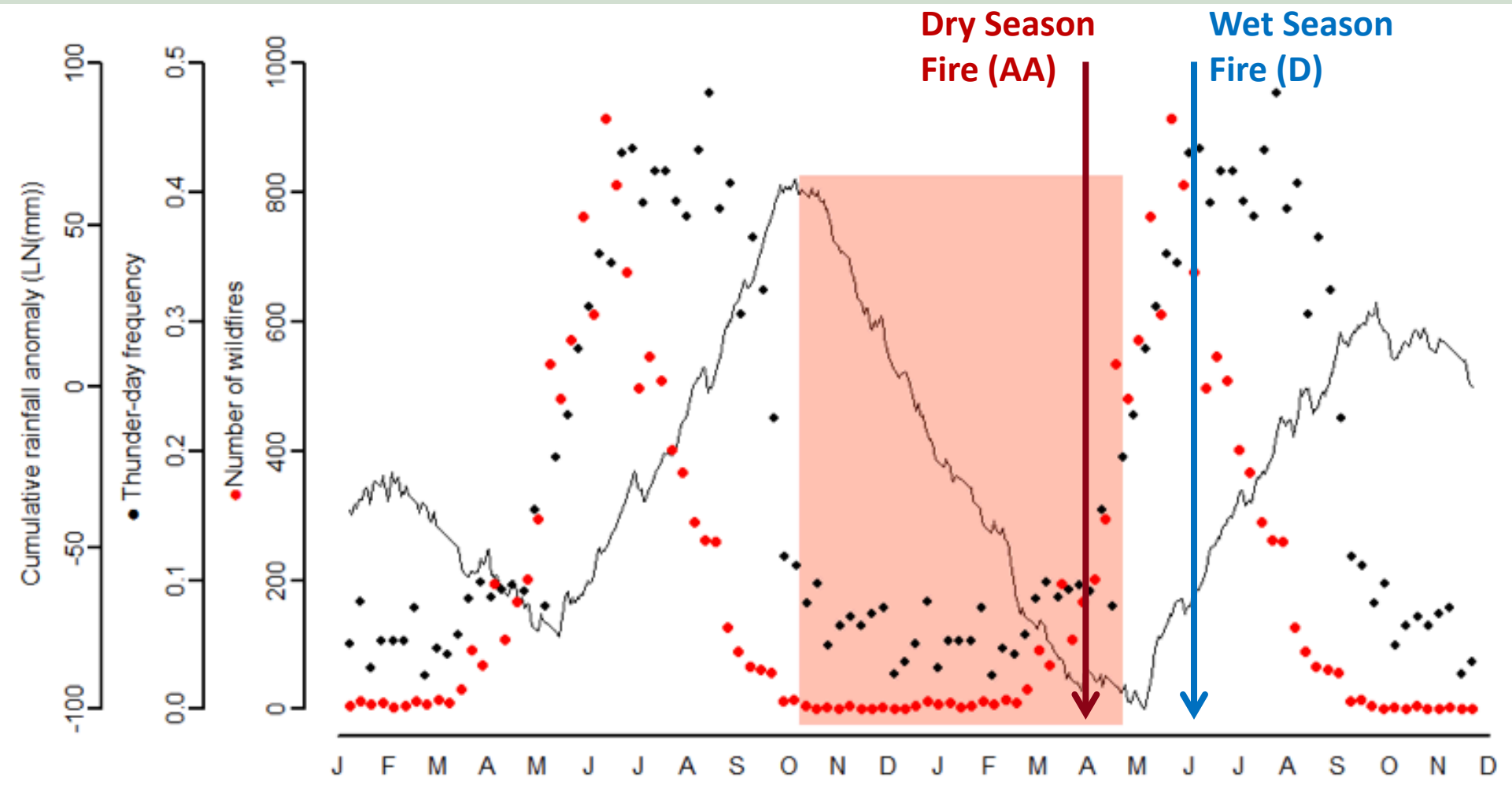
D water surface elevations



The dry season begins when precipitation declines



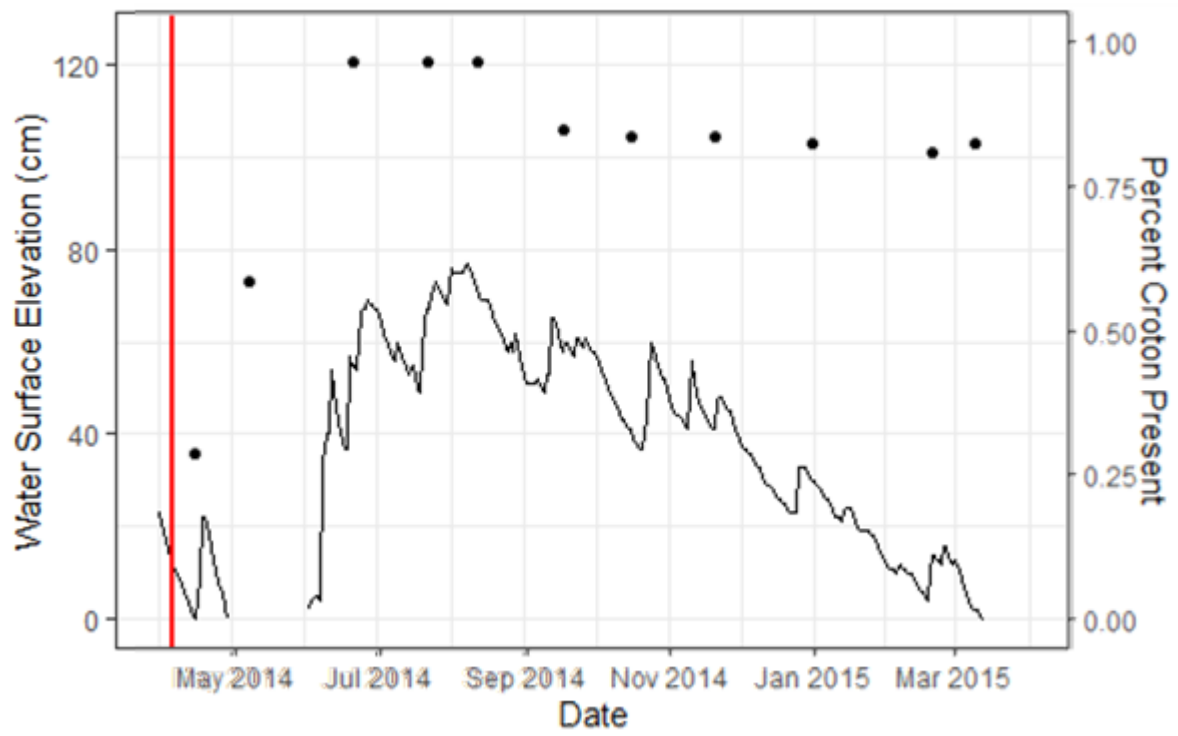
The dry season begins when precipitation declines



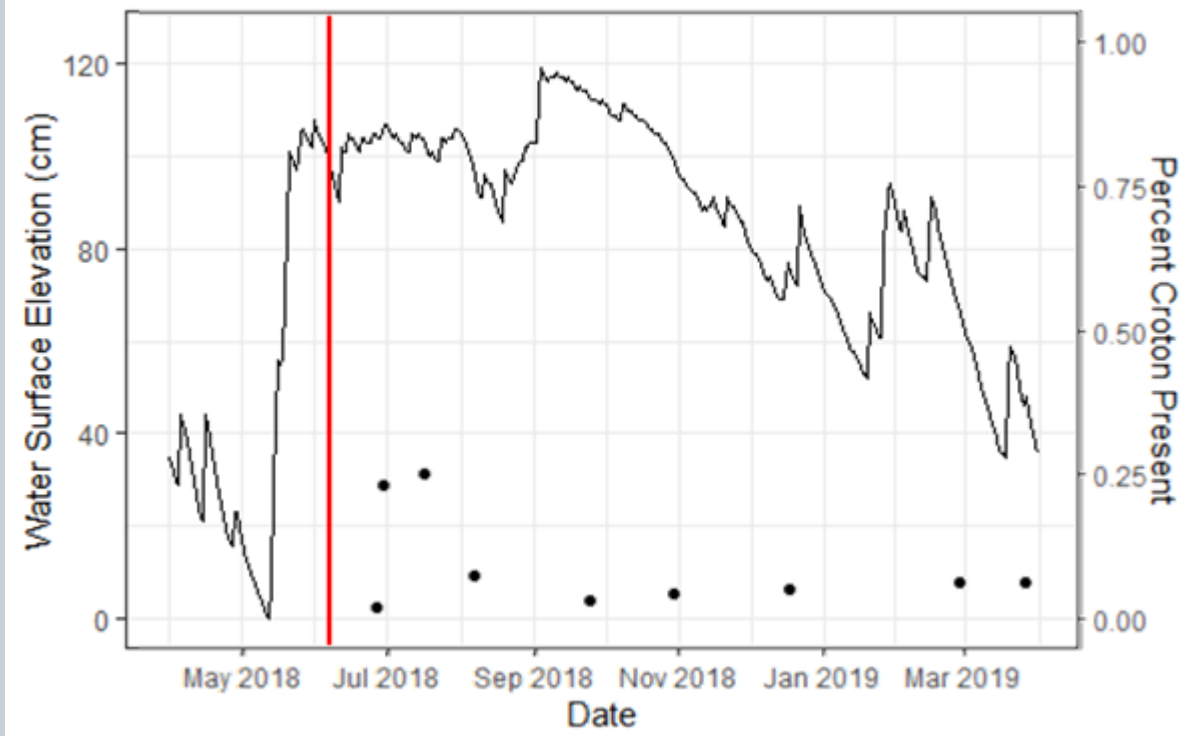
Croton post-fire recovery linked to hydrology



Block AA Croton Presence and Hydrology



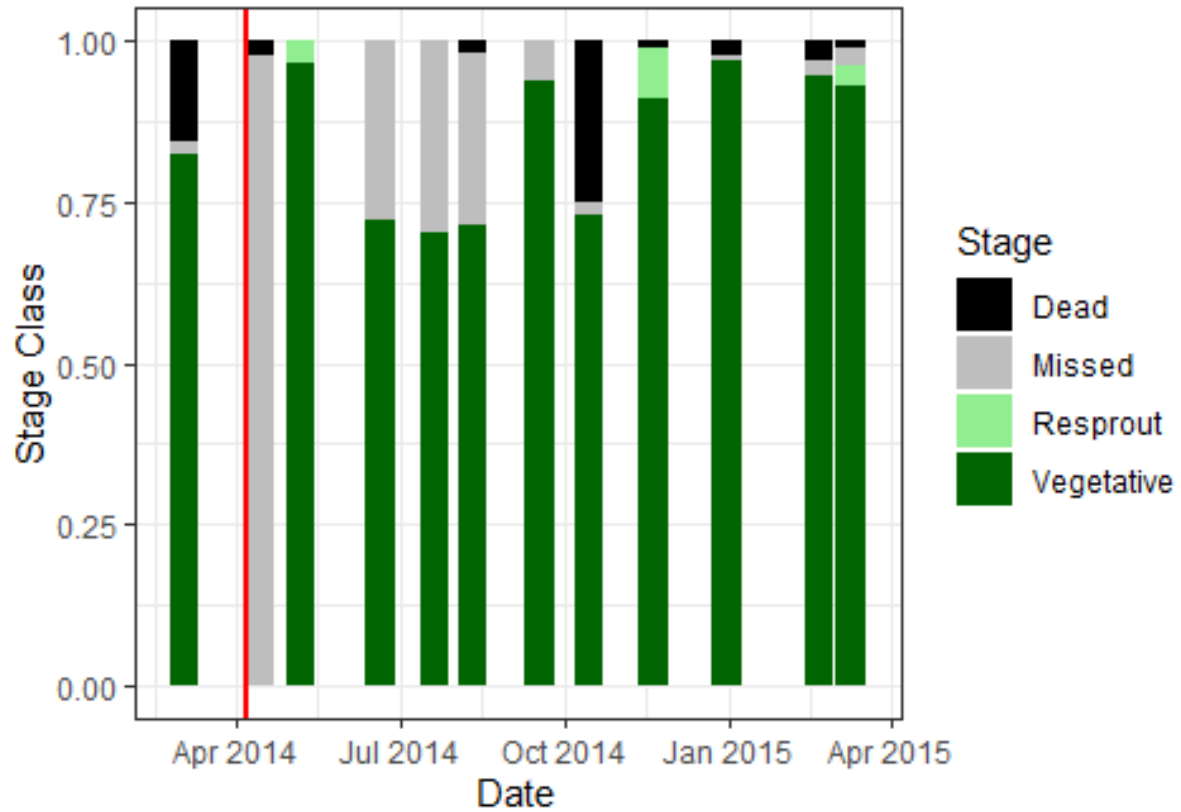
Block D Croton Presence and Hydrology



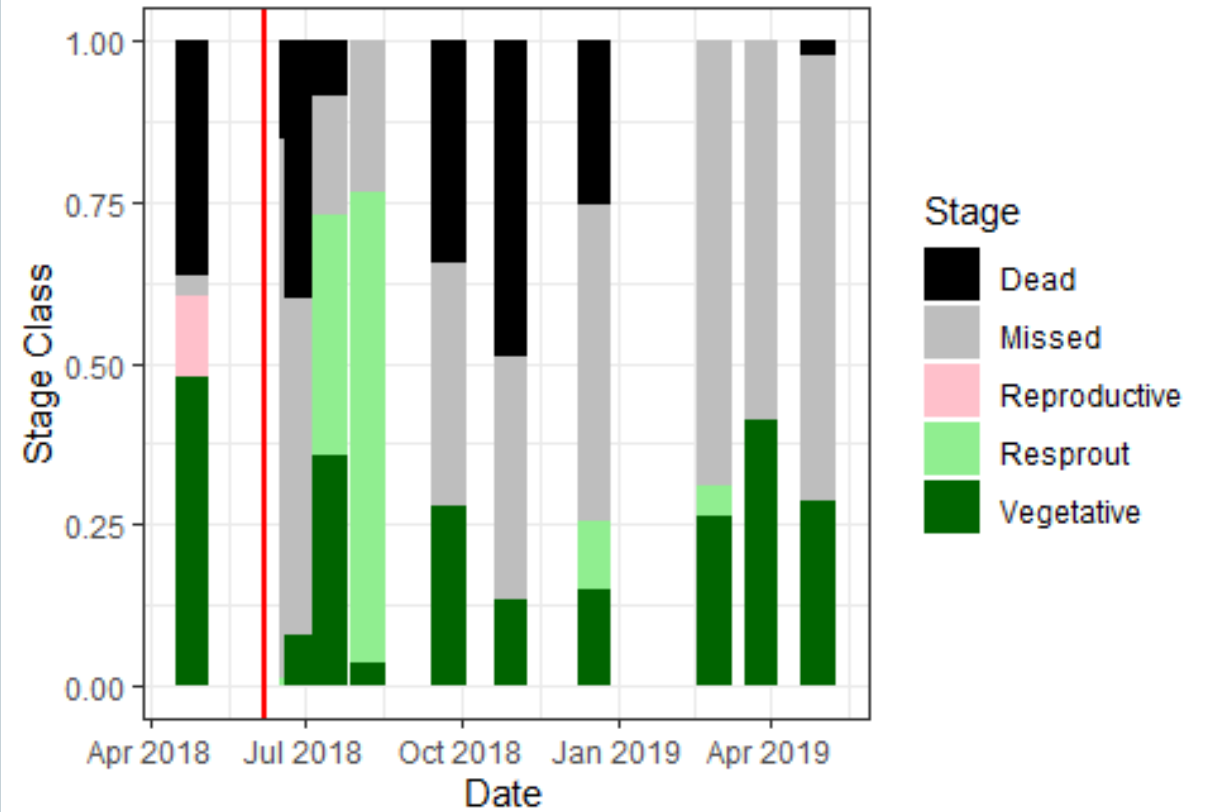
More absences and deaths after wet-season fire



AA Croton Stage Classes



D Croton Stage Classes



Preliminary conclusions: Inundation following fire reduces survival



- **WET SEASON VS. DRY SEASON BURNING AFFECTS SURVIVAL**
- ***CROTON LINEARIS* RESPROUTS IMMEDIATELY FOLLOWING FIRE, AND SURVIVAL DECLINES OVER TIME**
- **HYDROLOGY CAN BE MANAGED**

Thank you



- Jimi Sadle
- Dr. Ben Baiser
- Leonard Pearlstine
- Owen Schneider
- Stephanie Bohlman and
Crandall Fire Lab