

Acadia National Park – October 2018

Squirreled away: how climate change and small mammals will reshape Acadia NP



Alessio Mortelliti

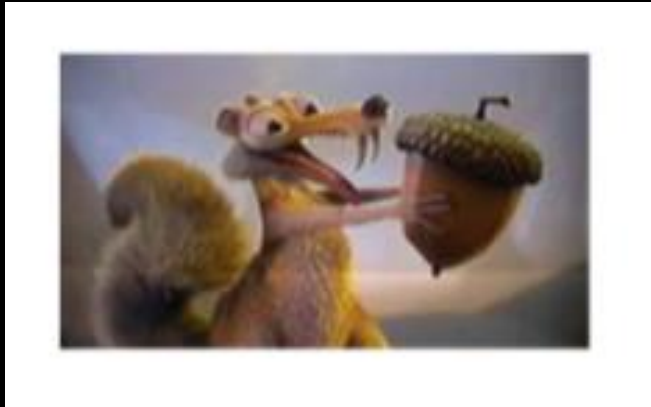
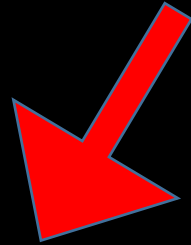
Grentzmann I, Calkins S, Fisichelli N, Brehm A, Fraver S

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Important decisions





Seed consumption



Seed dispersal

Why do squirrel decisions matter?



Trees disperse by using the BIG (and small) forces of nature



inadvertent dispersal



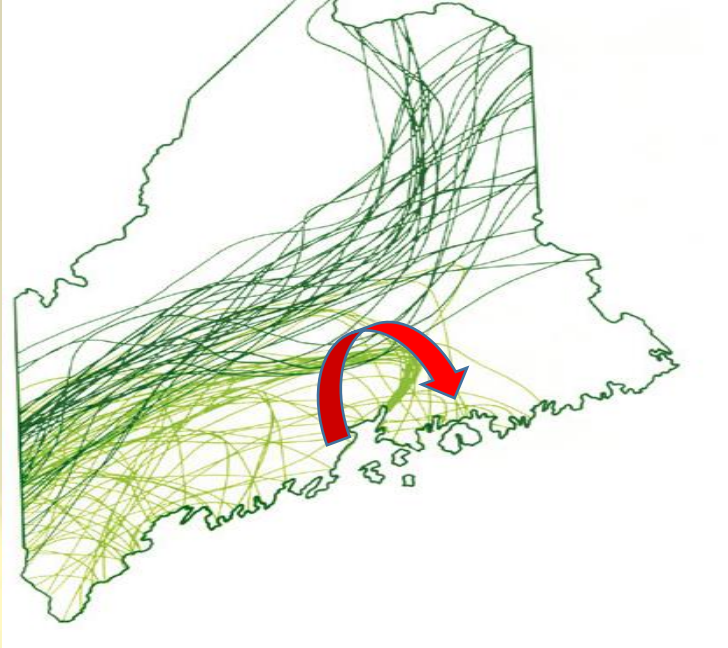
Facts on small mammals & seed predation



- CLEAN UP CREW
- BIRTH CONTROL
- SMALL SIZE BIG APPETITE
- HIGH DENSITY



climate change

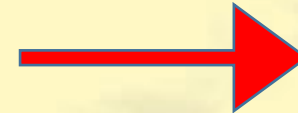


- 120 species with range limits below Acadia
- Expanding (Prasad et al. 2017)

- Black oak *Quercus velutina*

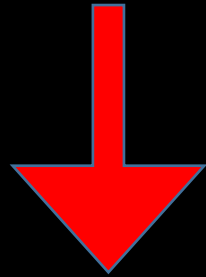


- Sweet birch *Betula lenta*

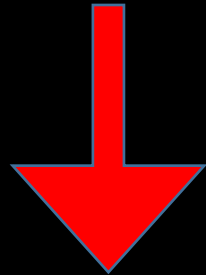


How will this novel seed-smammals interaction unfold?

We have no idea!



winners and losers



determined by small mammals

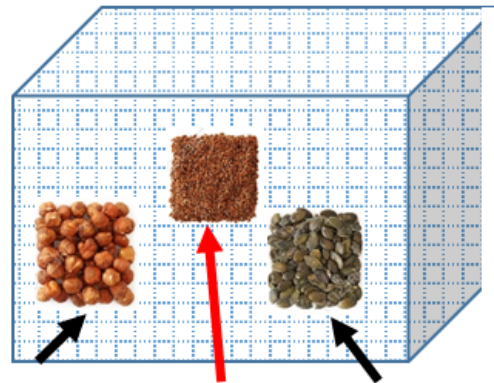


the GATEKEEPERS of
Acadia National Park

Methods



IR camera



Like

Non-Acadia

Not like



2017-09-03 07:18:10 AM

53°F

M

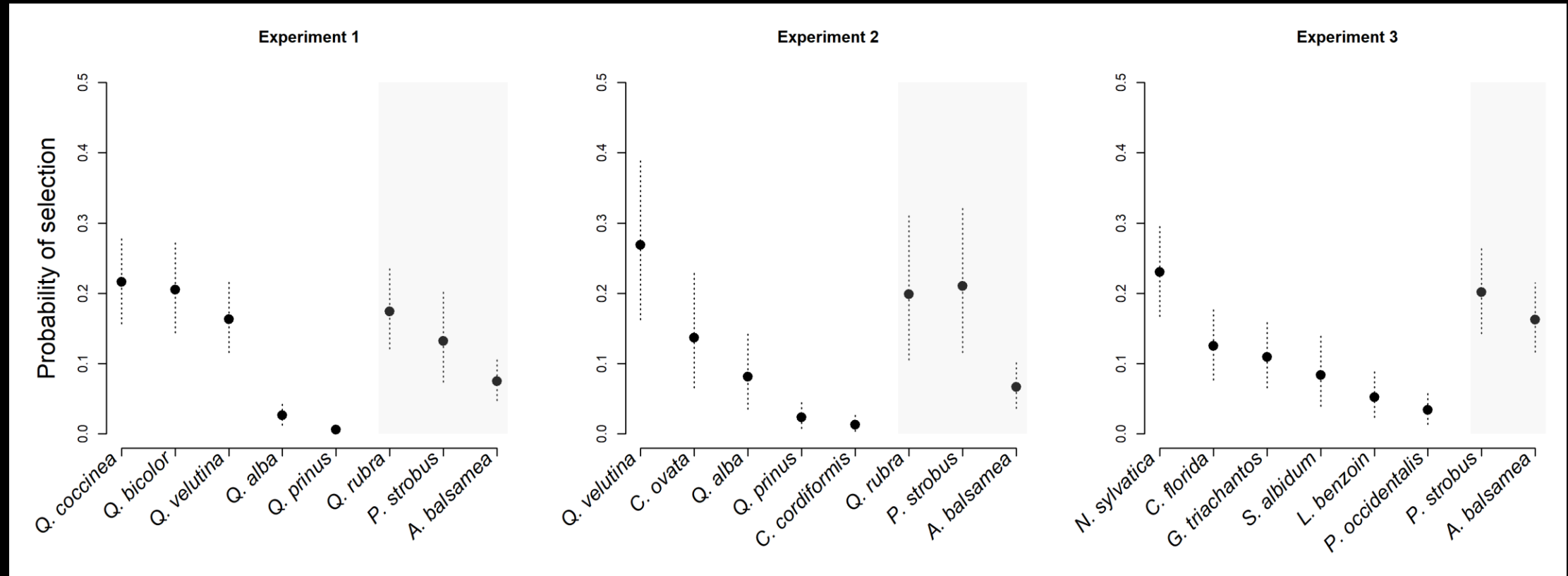


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RECONYX
SEE WHAT YOU'VE BEEN MISSING.



Results: strong seed selection



Size and shell hardness matter!

