

Problem

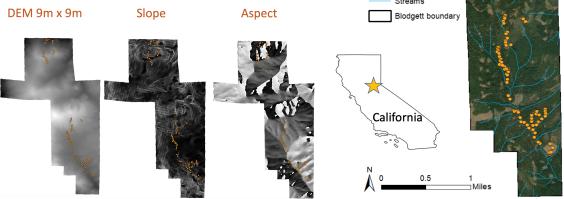
Dead fuel moisture is important for many fire modeling and management applications. Despite a possible link between soil moisture and fuel moisture, current fuel moisture indices are calculated based on atmospheric conditions only

Research Questions

- 1) Does soil moisture improve fuel moisture predictions?
- 2) Is there a difference in response between 1-hr and 10-hr fuels to atmospheric and soil moisture conditions?

Blodgett Research Forest, Sierra Nevada foothills, CA

102 samples of both 1-hr and 10-hr fuels



evidence shows that fuels don't burn as predicted by current models



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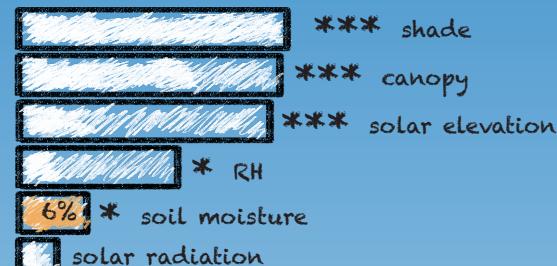
A Missing Link? Fuel Moisture - Soil Moisture Interaction

Relative importance of variables from linear regression

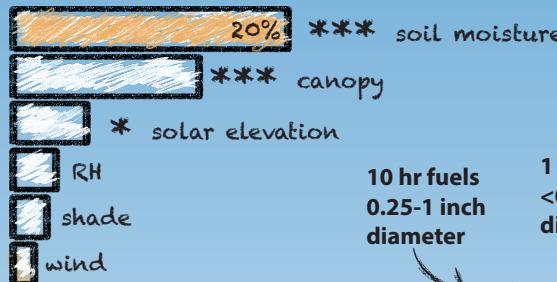
significance:

0.001 *** 0.001 ** 0.05*

1 hr fuels $r^2=0.60$



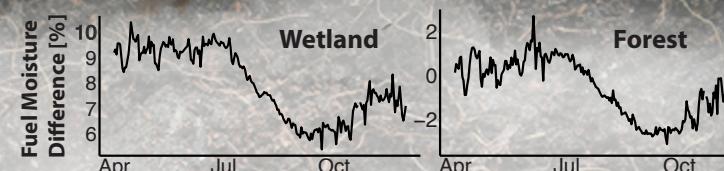
10 hr fuels $r^2=0.70$



1 hr fuels
0.25-1 inch diameter



Difference between regression that uses soil moisture as a predictor and the one that doesn't



Collected Variables

