

Updating a forest management tool with climate response recorded in tree rings

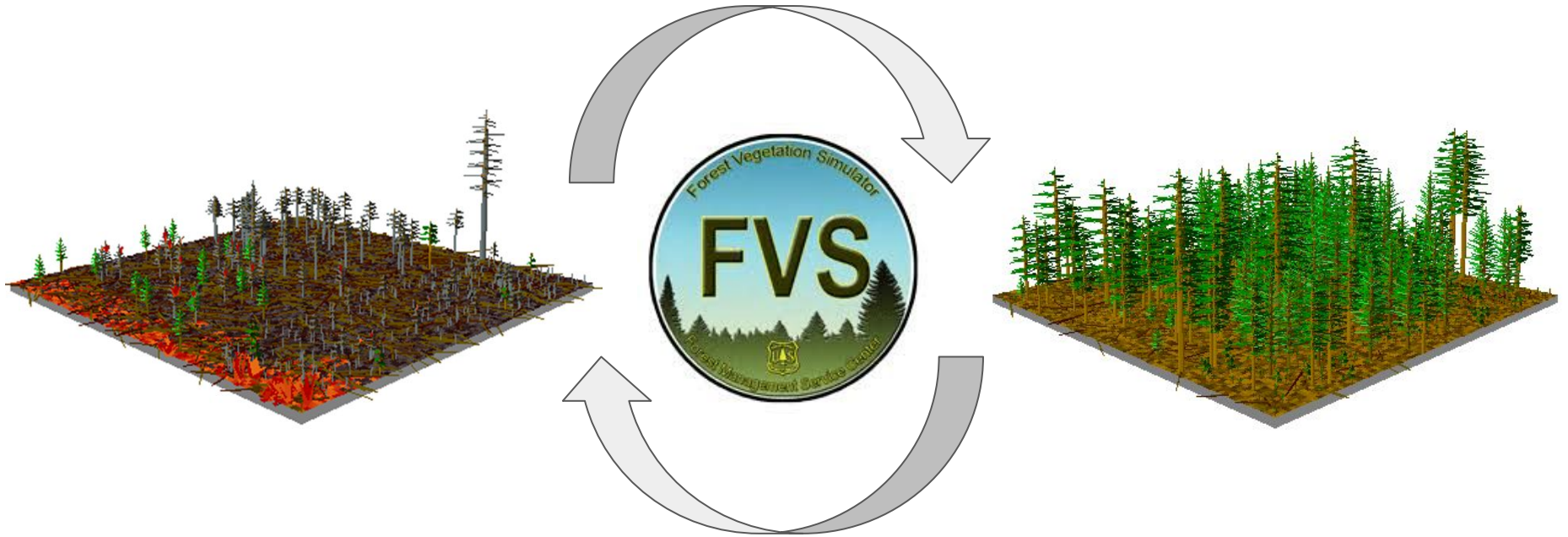
Courtney Giebink, R. Justin DeRose, Mark Castle, John D. Shaw, & Margaret E.K. Evans

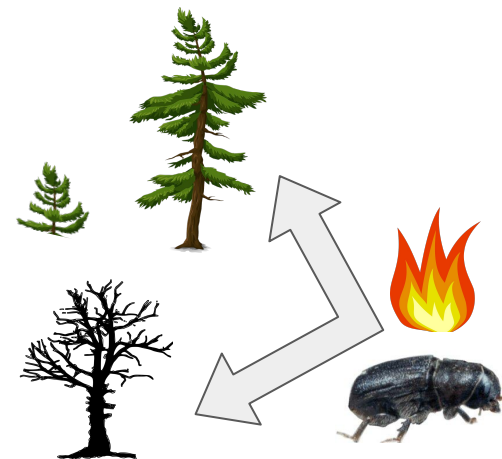
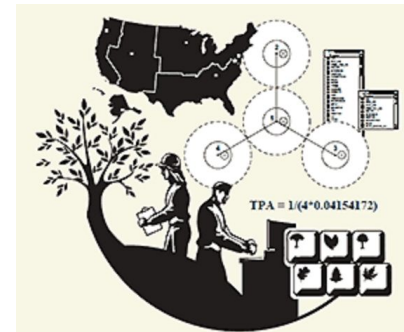
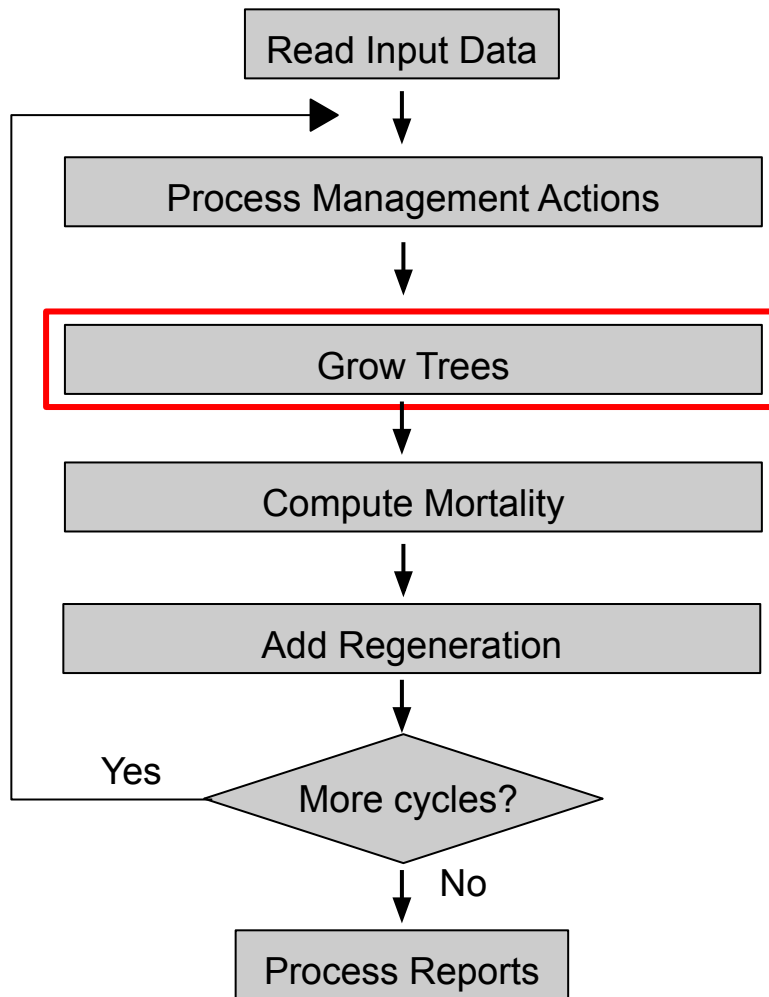
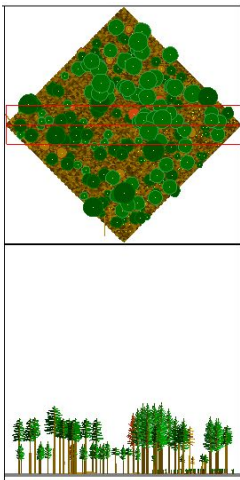


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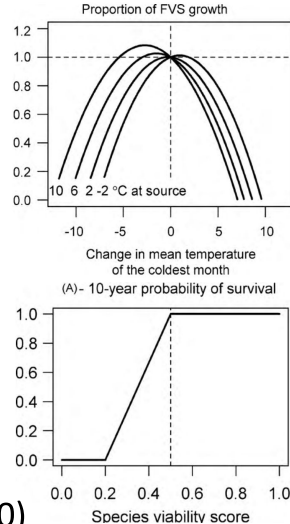
Forest Vegetation Simulator



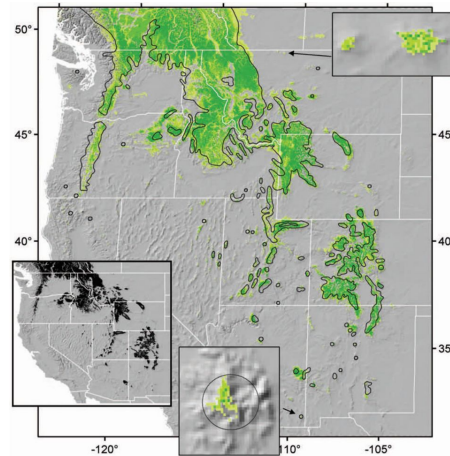


Ring Width = f (Tree Size, **Climate**, Competition, & Site Index)

Growth ←   → Climate



(Crookston et al. 2010)



(Rehfeldt et al. 2006)

Building the Forest Inventory and Analysis Tree-Ring Data Set

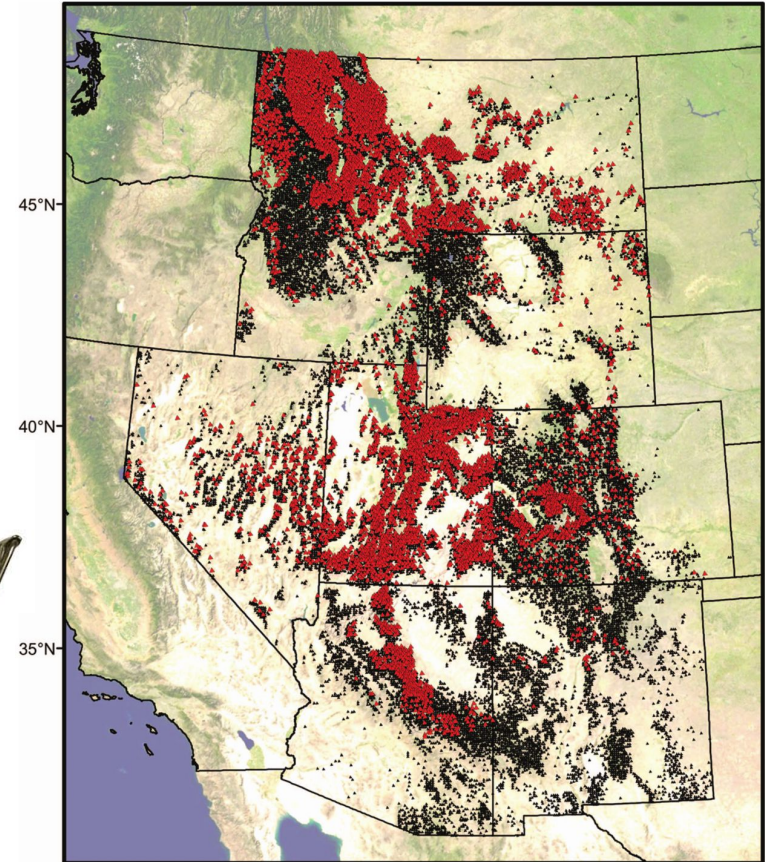
Journal of Forestry
2017 155(4): 283-291

Robert J. DeRose, John D. Shaw, and James N. Long

- Tree-ring data (red)
- FIA plots (black)



growth = f(size, climate, competition, site index)



DeRose, Shaw and Long 2017

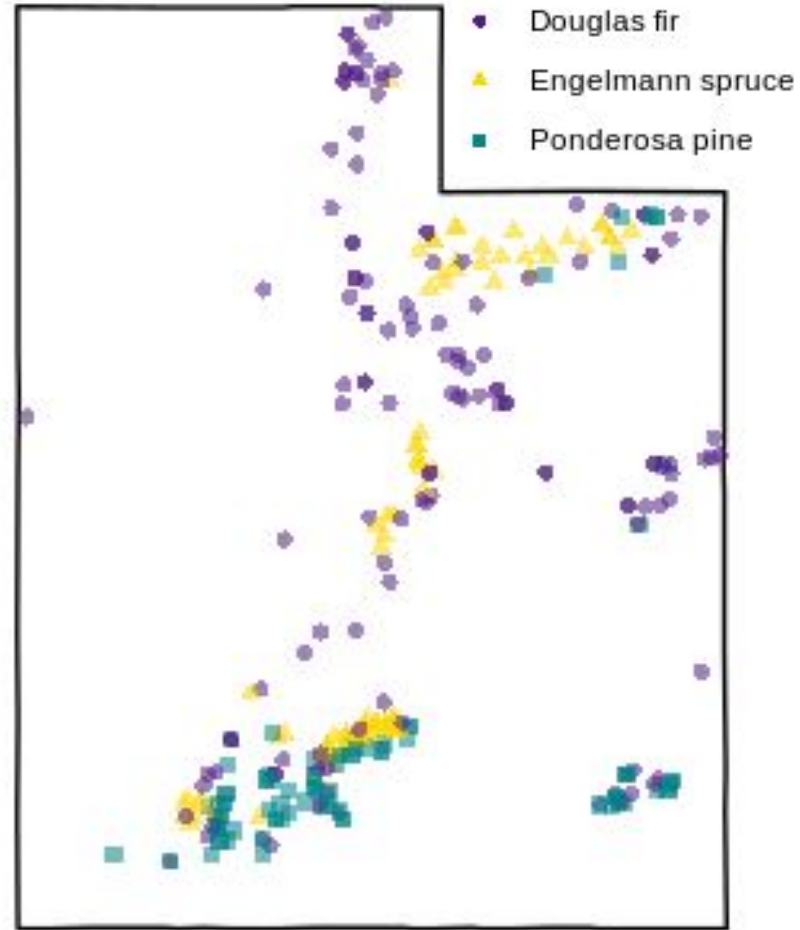
Calibration



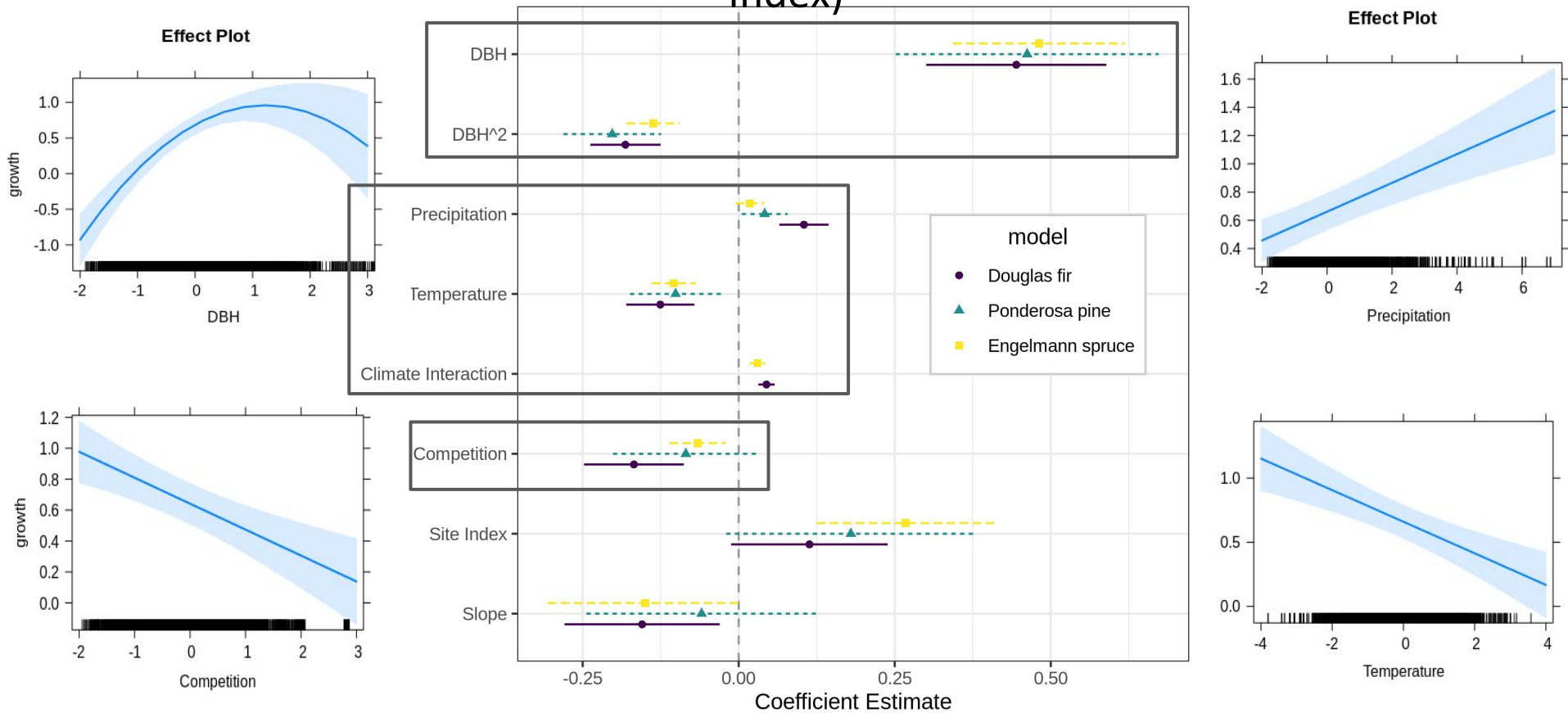
FIA



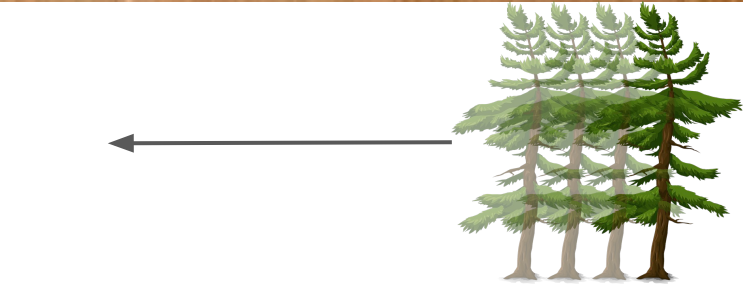
Growth = $f(\text{size, climate, competition, site index})$



Growth = f (Tree Size, Climate, Competition, and Site Index)



Calibration



FIA

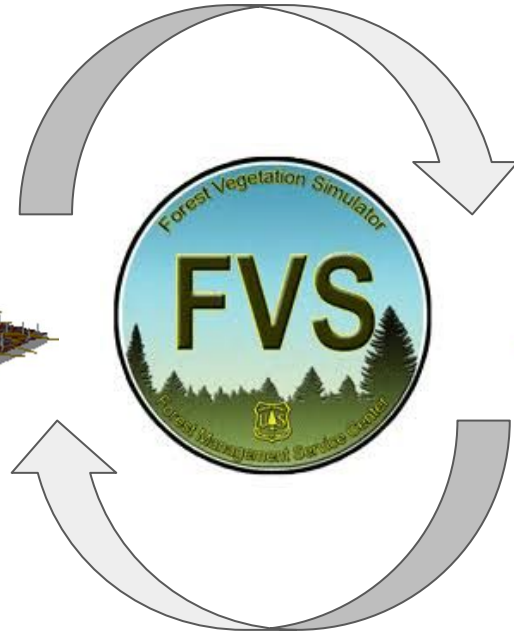
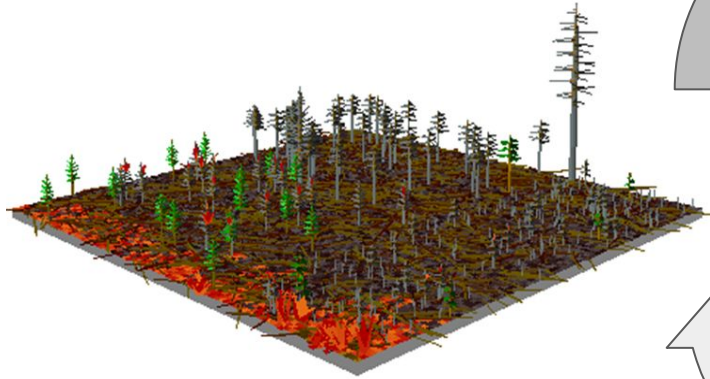
Growth = $f(\text{size, climate, competition, site index})$



Validation



Growth = f (Tree Size, **Climate**, Competition, and Site Index)



Thank you!

Evans Lab:
Emily Schultz
Erin Riordan
Kelly Heilman



Margaret Evans



Mark Castle



John
Shaw



Justin DeRose



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