

Effect of landscape on Spotted Wing *Drosophila* (*Drosophila suzukii*) infestation in raspberry

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Acknowledgments

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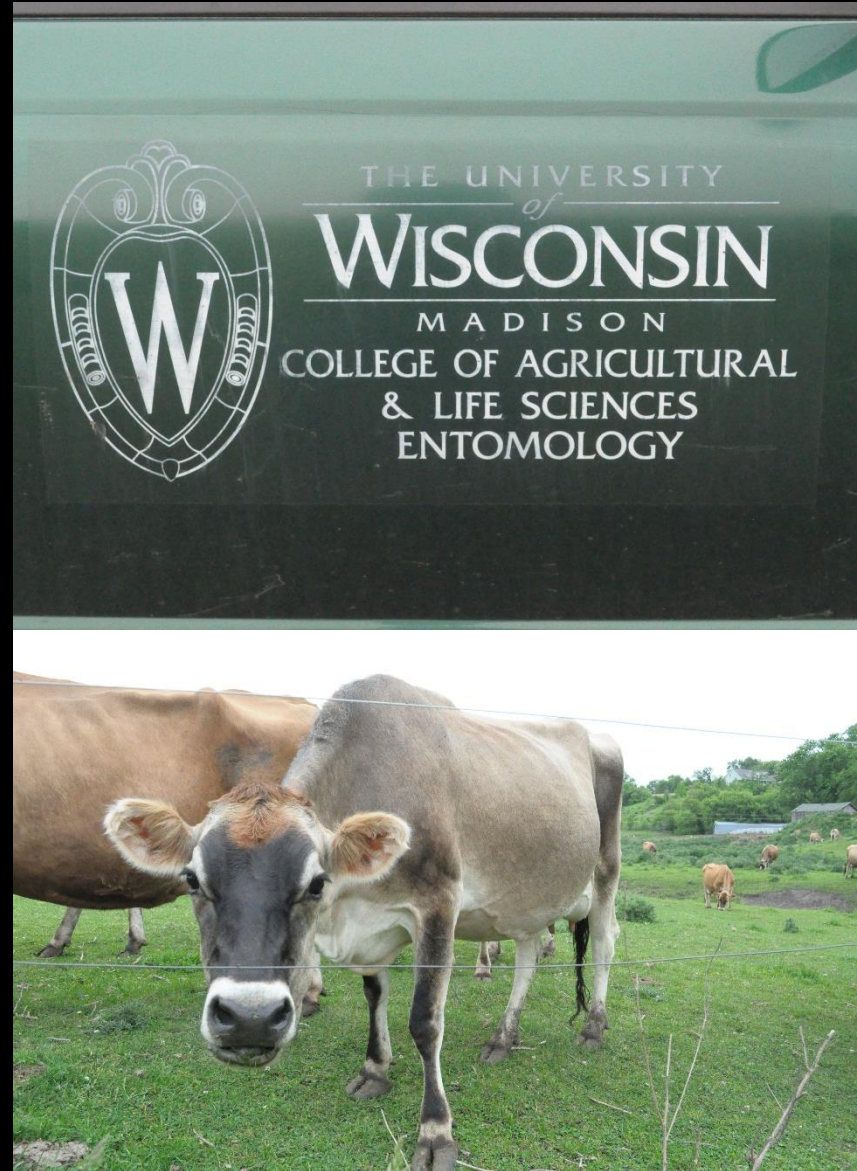
Participating growers

University of Minnesota-Twin Cities

Michigan State University

University of Wisconsin-Madison

- Gratton and Guédot lab members
- Technicians:
Caitlin Bergstrom
Tressa Franzmeier
Kiley Friedrich
Kathryn Hietala-Henschell
Keith Phelps



Contribution of landscape



Spotted wing drosophila



Matt Bertone 2013



Matt Bertone 2013

Inset: Hannah Burrack

Importance of landscape?

Do Spotted wing populations in
landscapes with more woodland
have earlier and more rapid
phenologies?

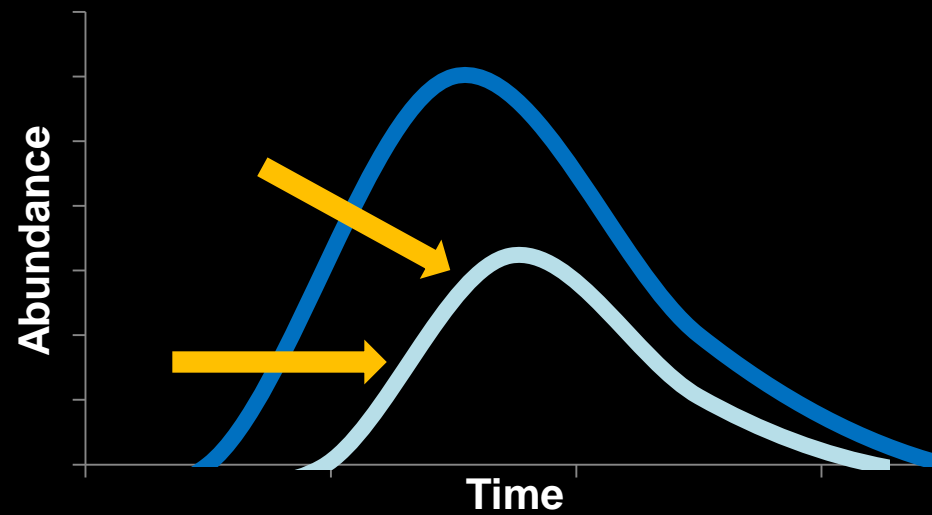
High Woodland



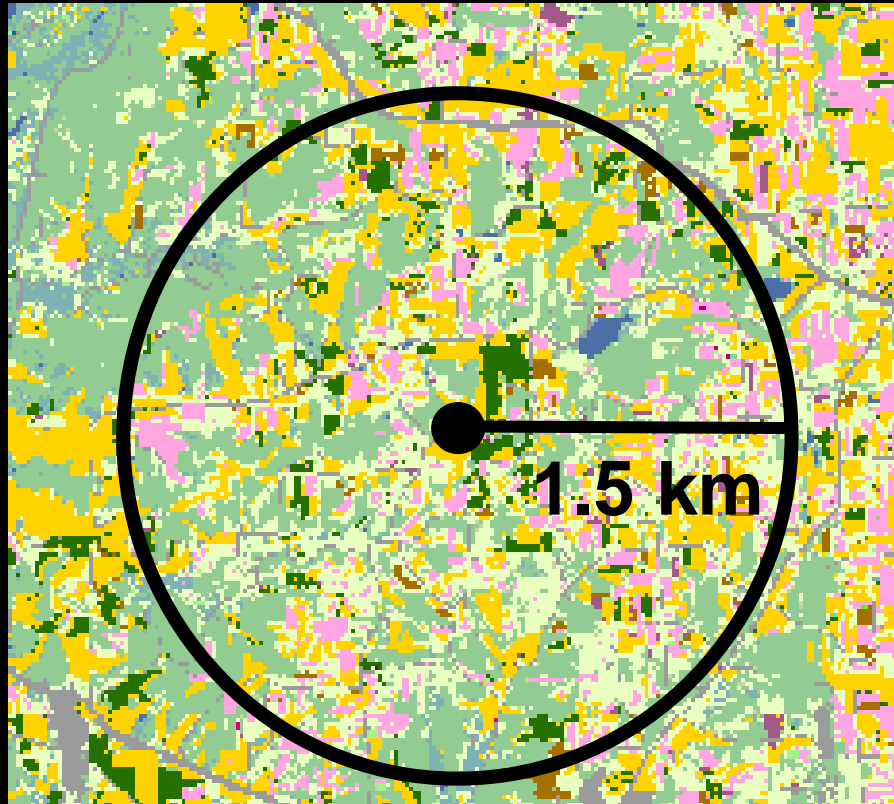
Low Woodland



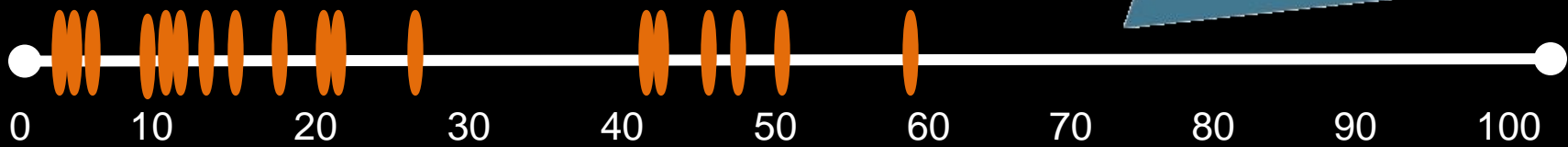
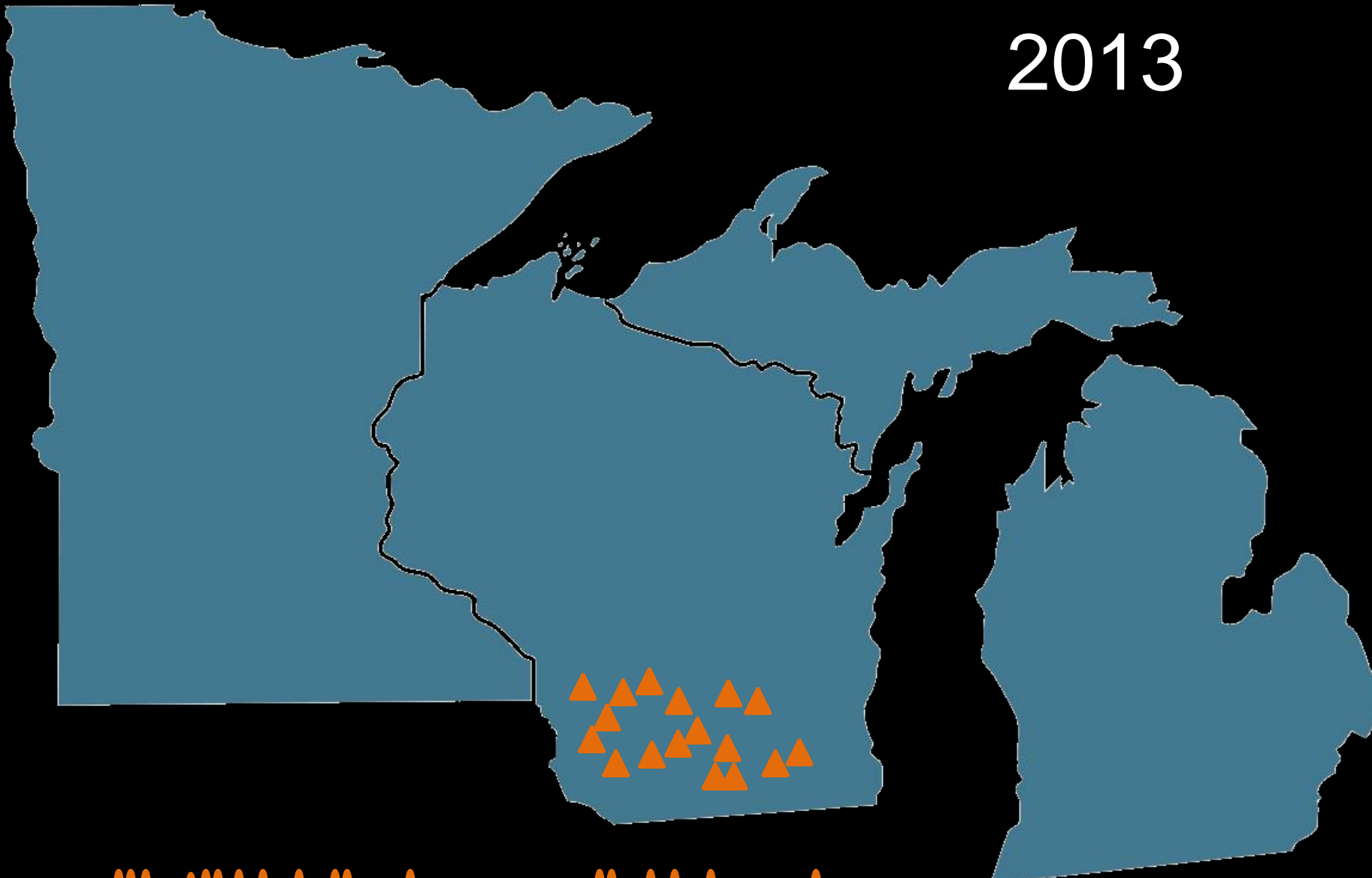
Hypotheses



Woodland Area + Edge

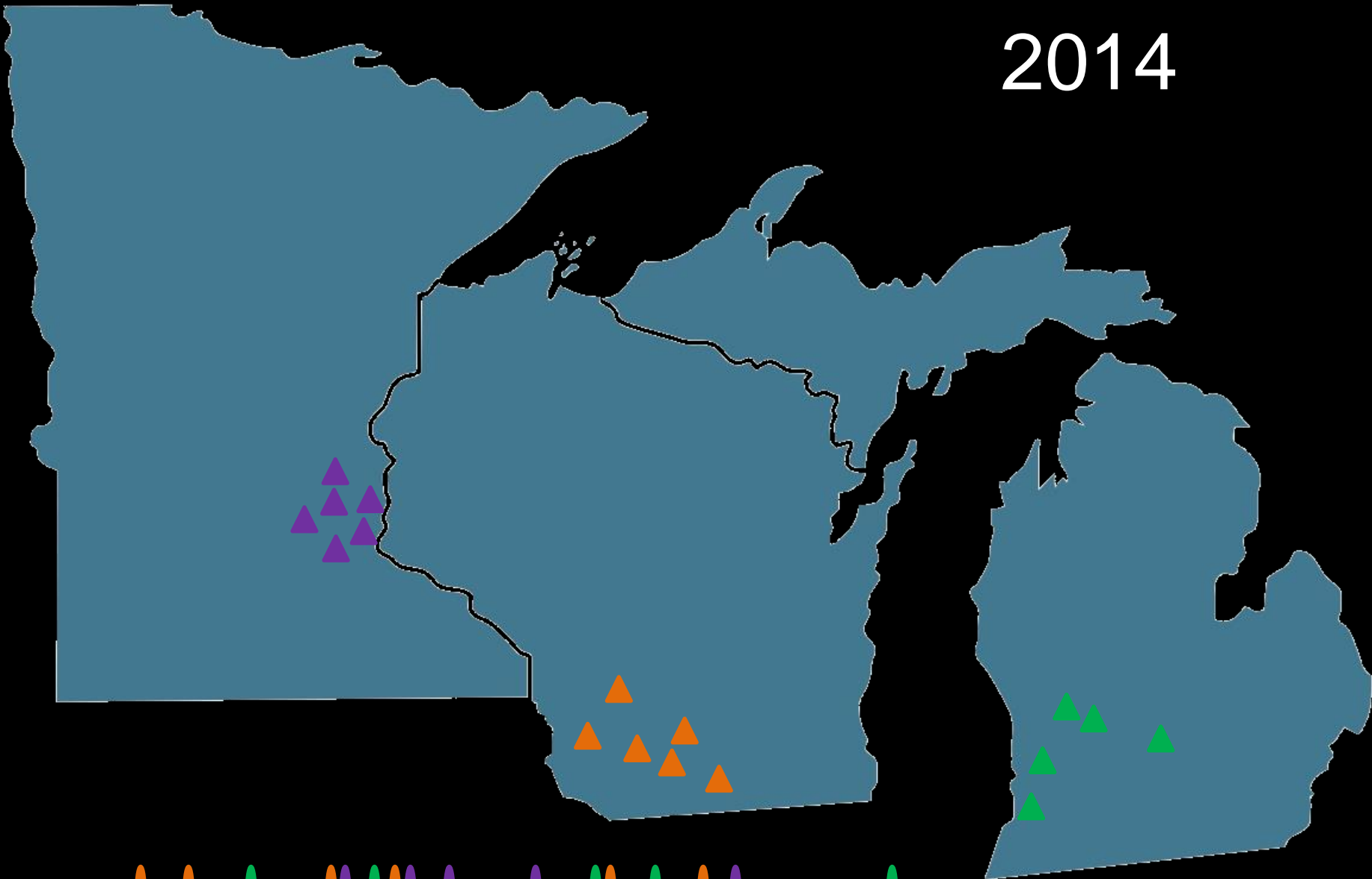


2013



% Woodland Area at 1.5km scale

2014

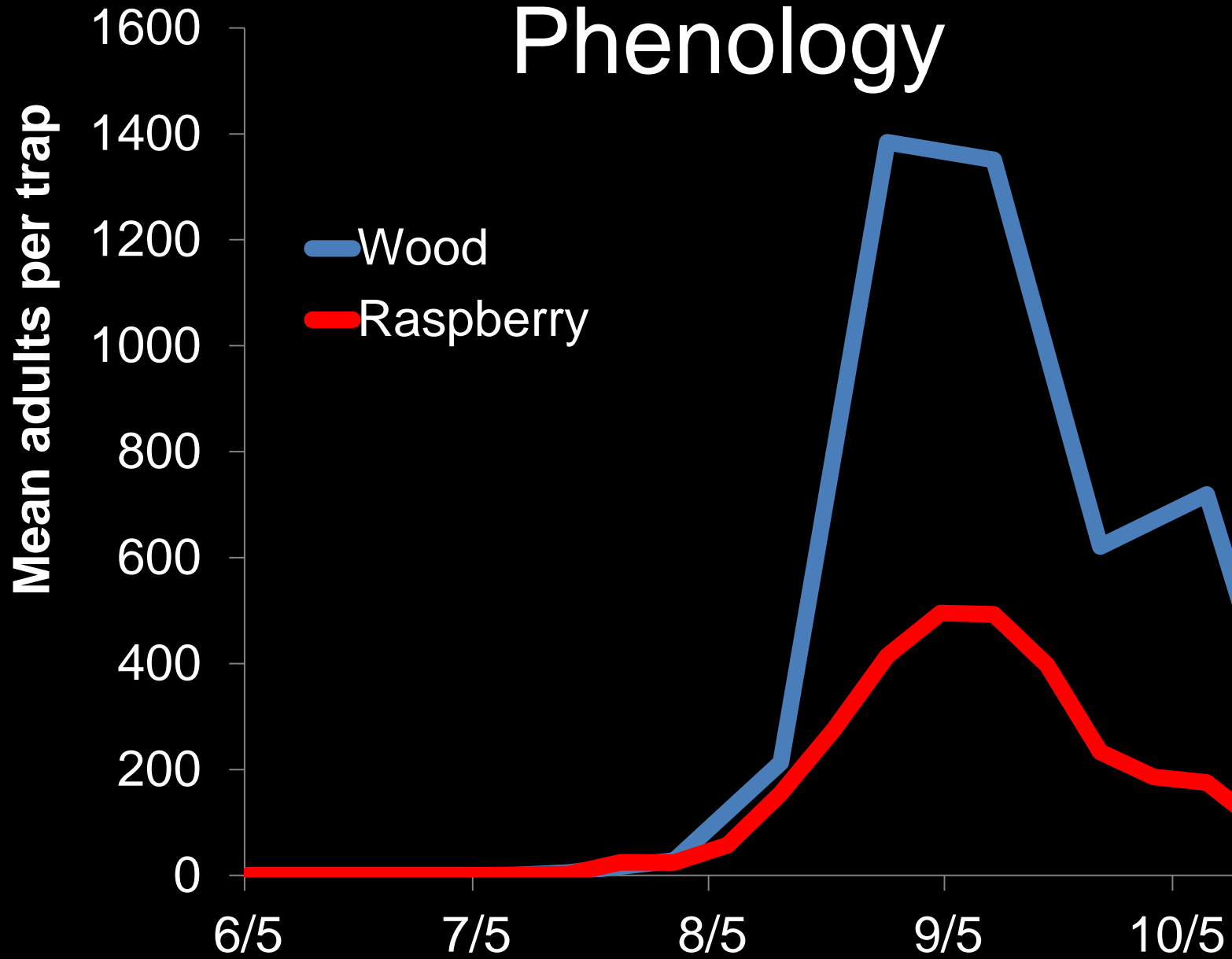


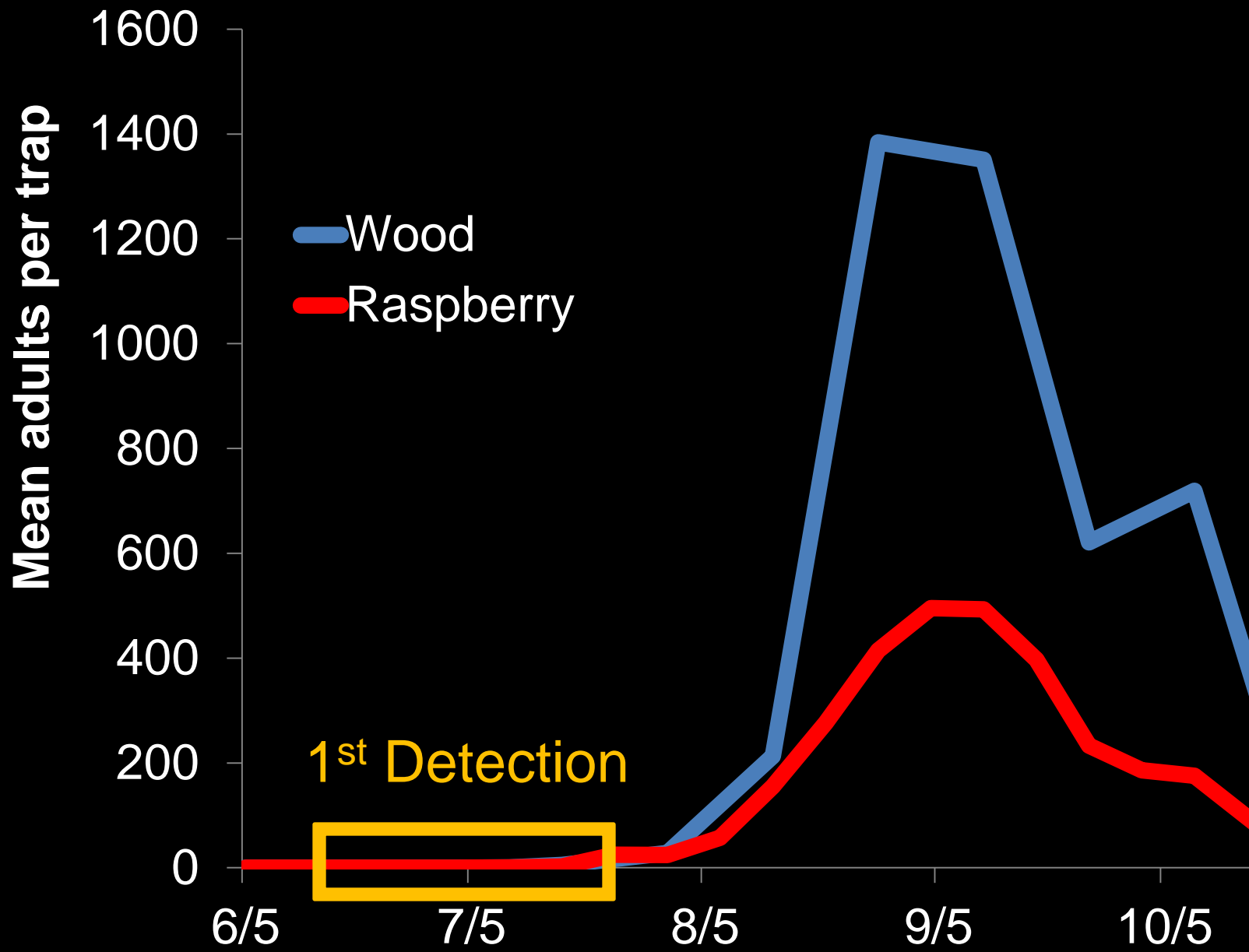
% Woodland Area at 1.5km scale

Methods

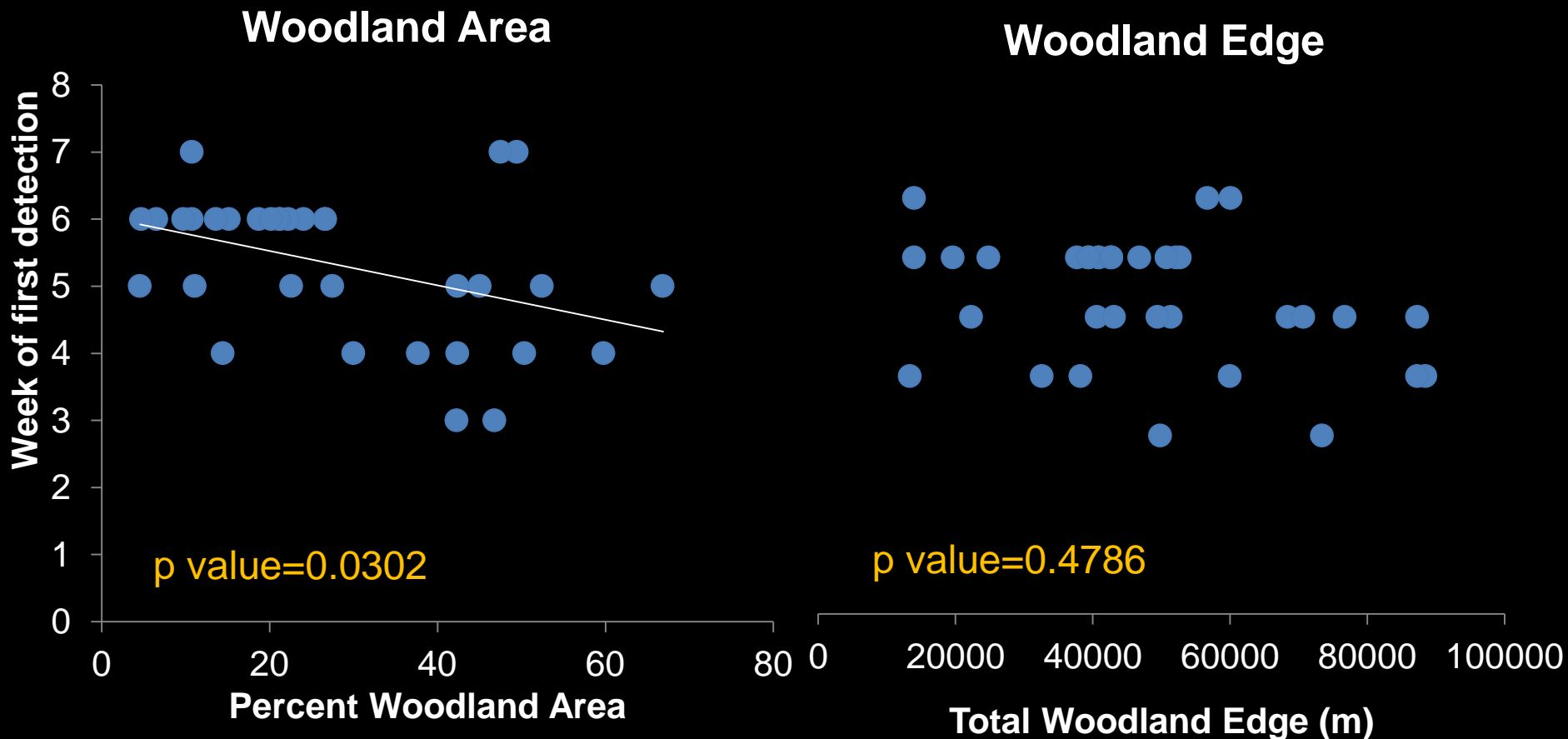


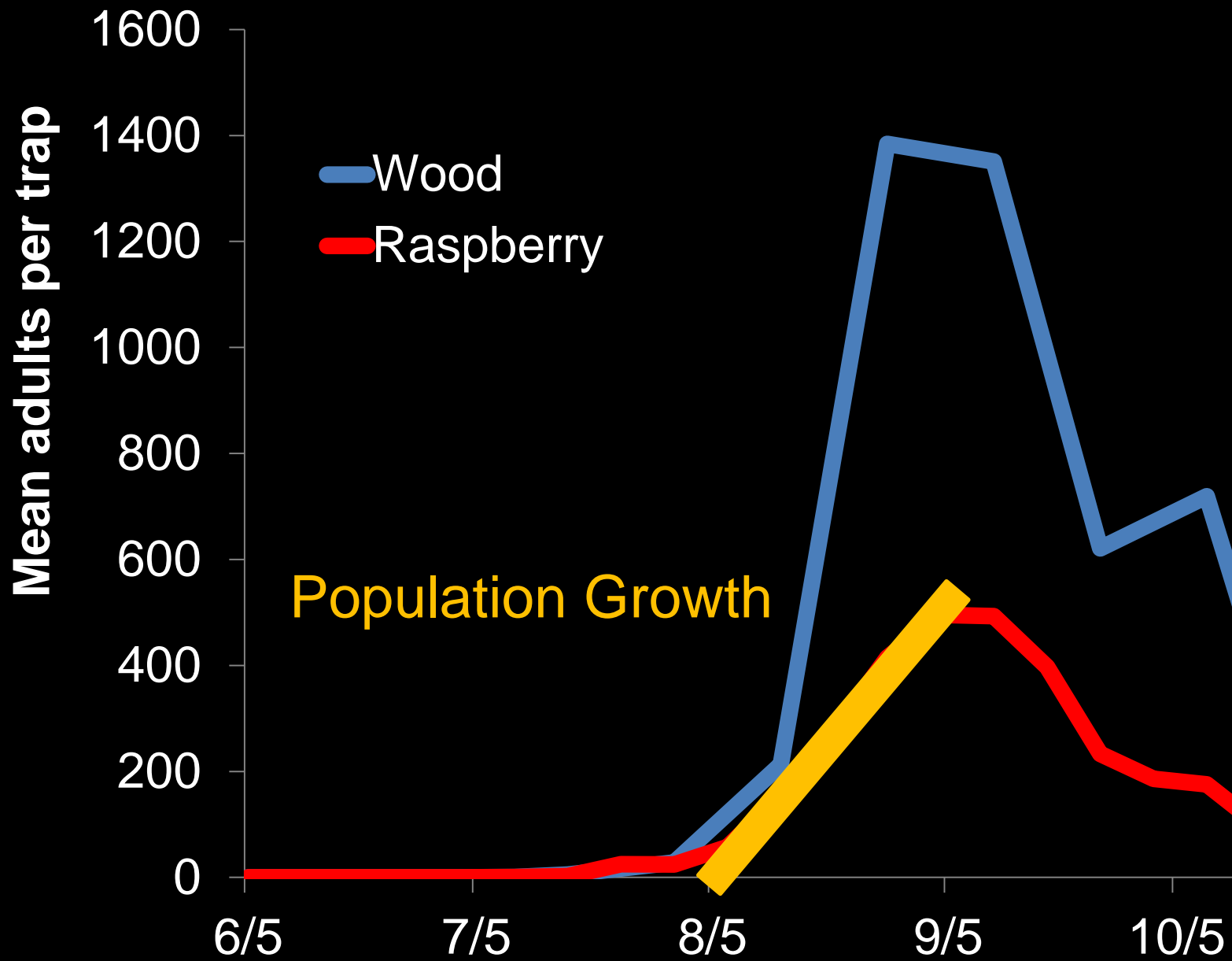
Phenology



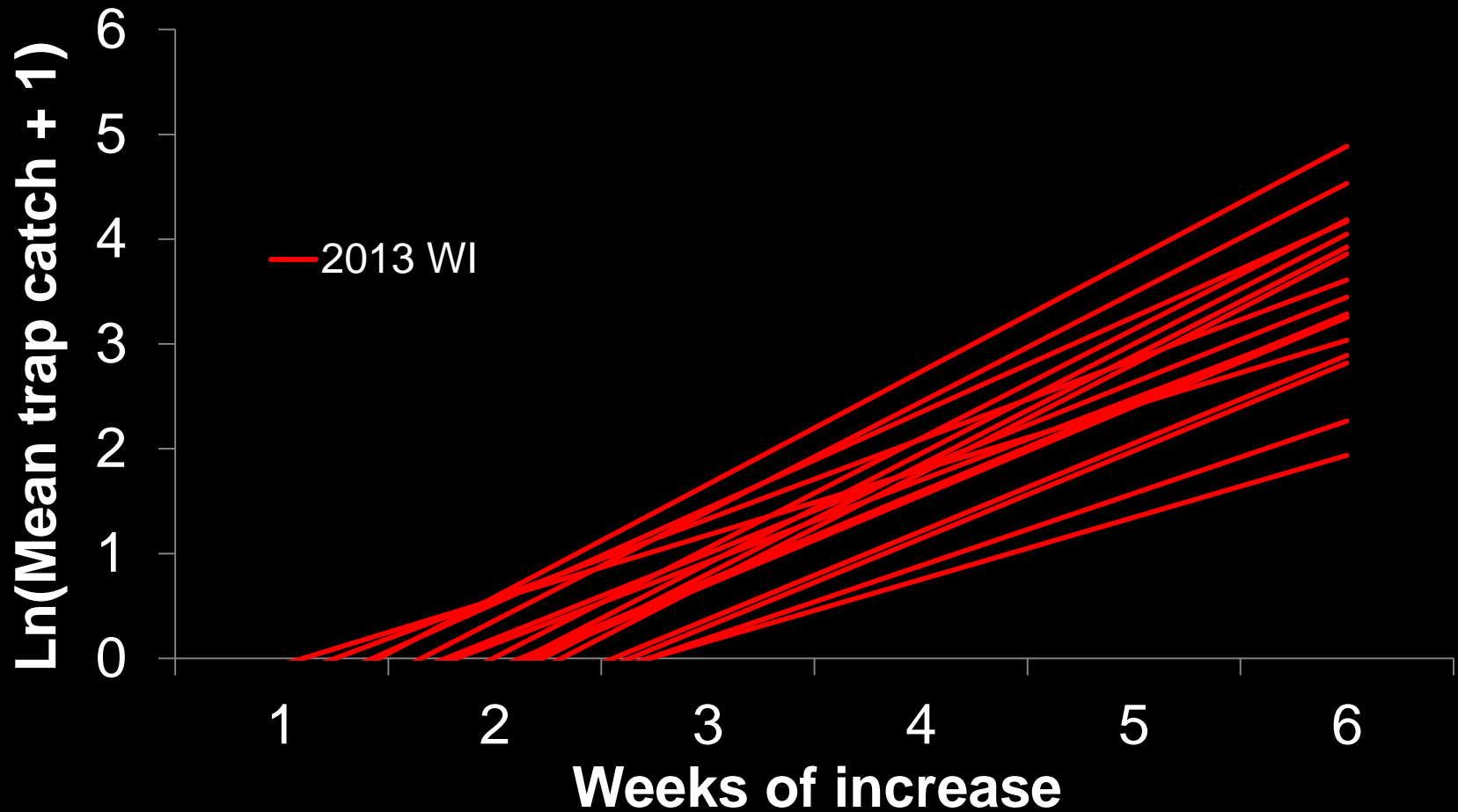


Earlier detection at farms in landscapes with high woodland area

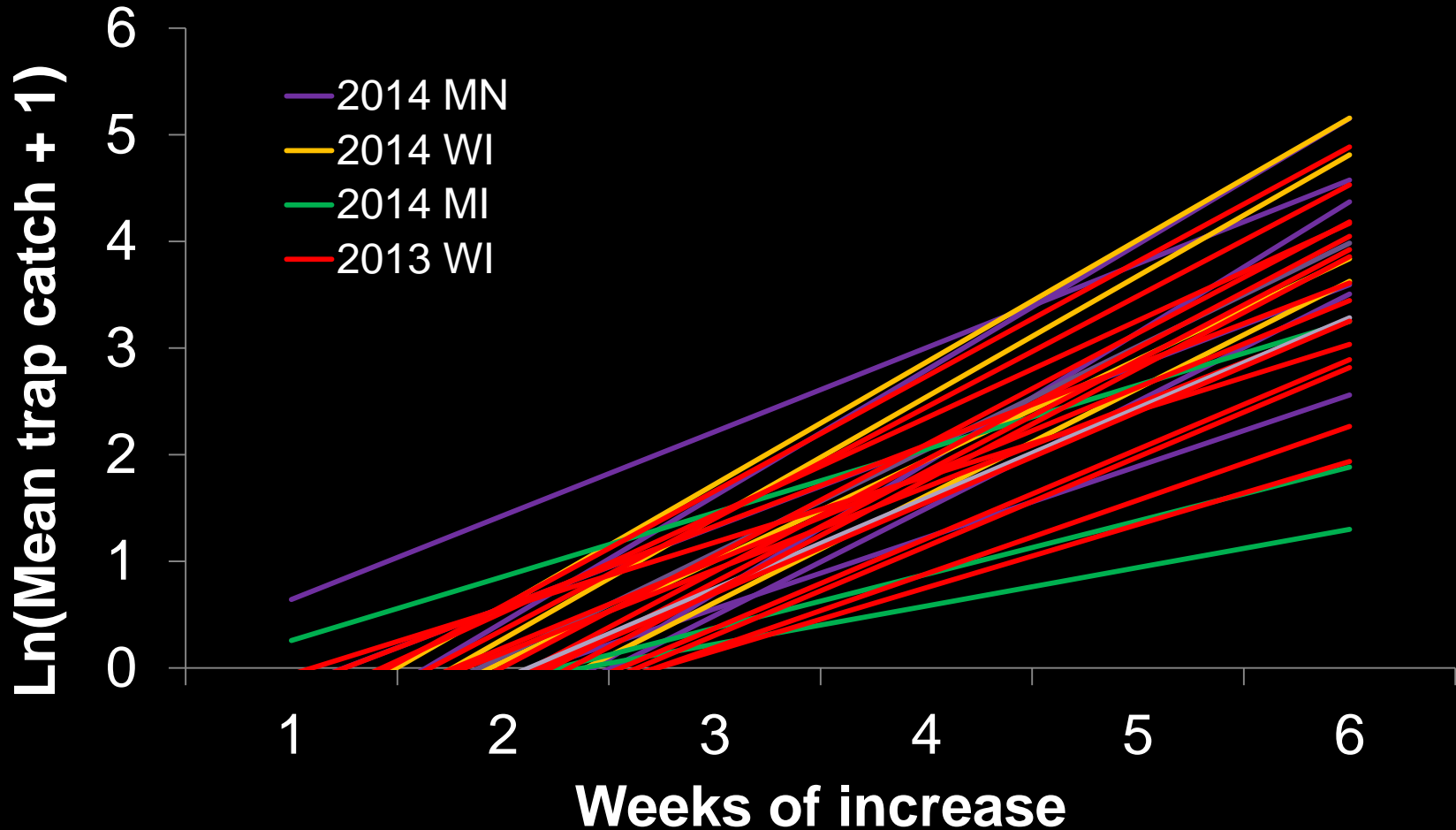




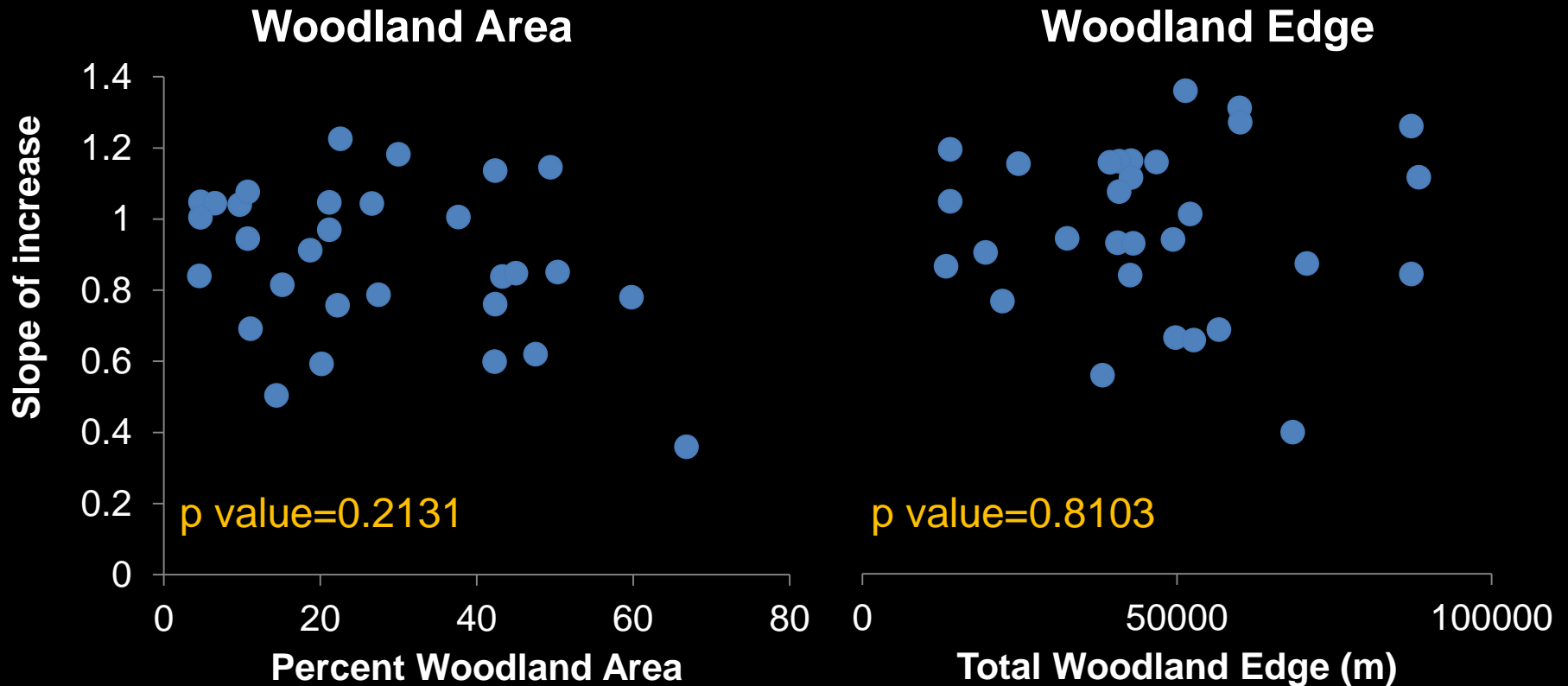
Faster population growth?



Faster population growth?

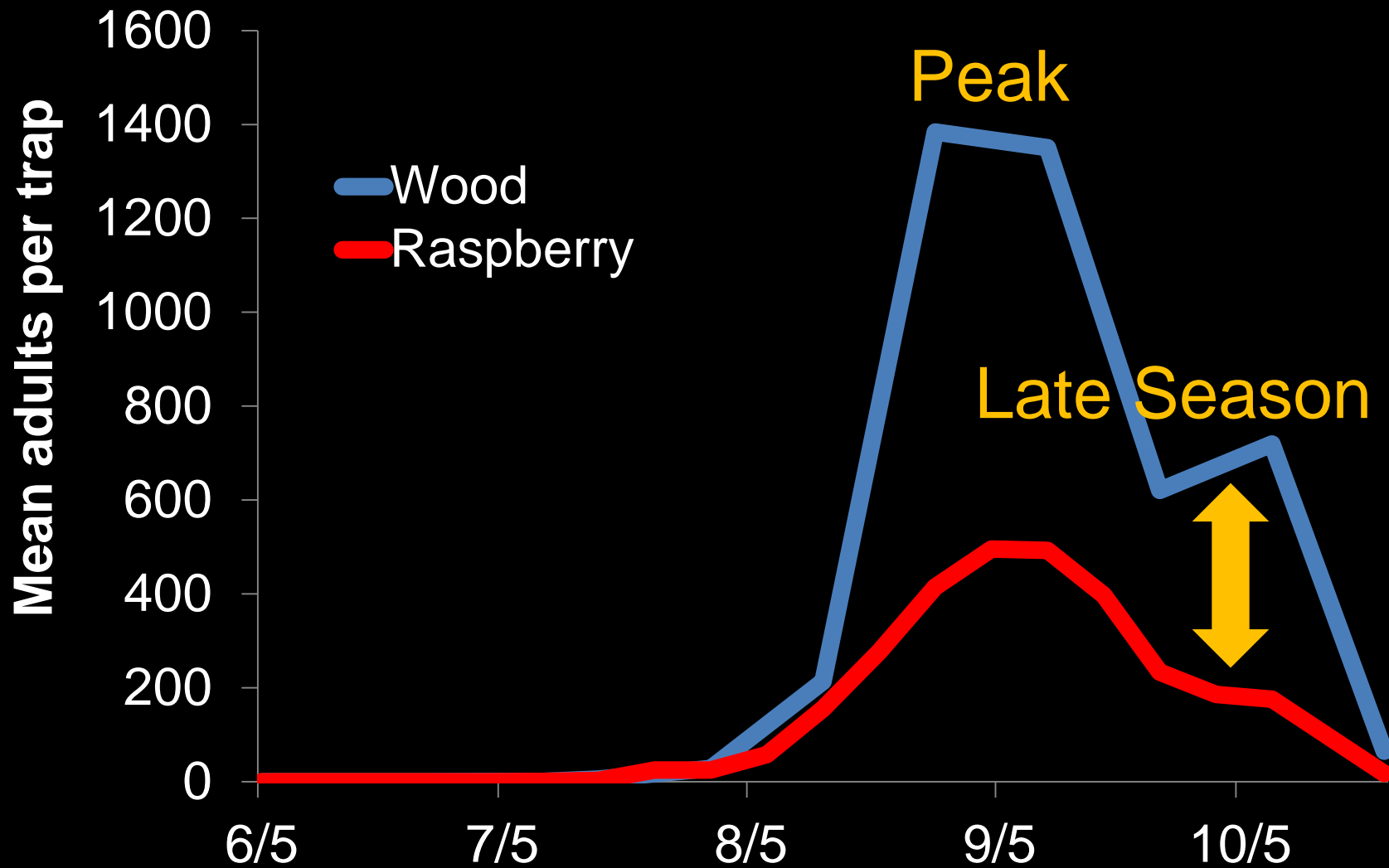


No effect on population growth



Summary

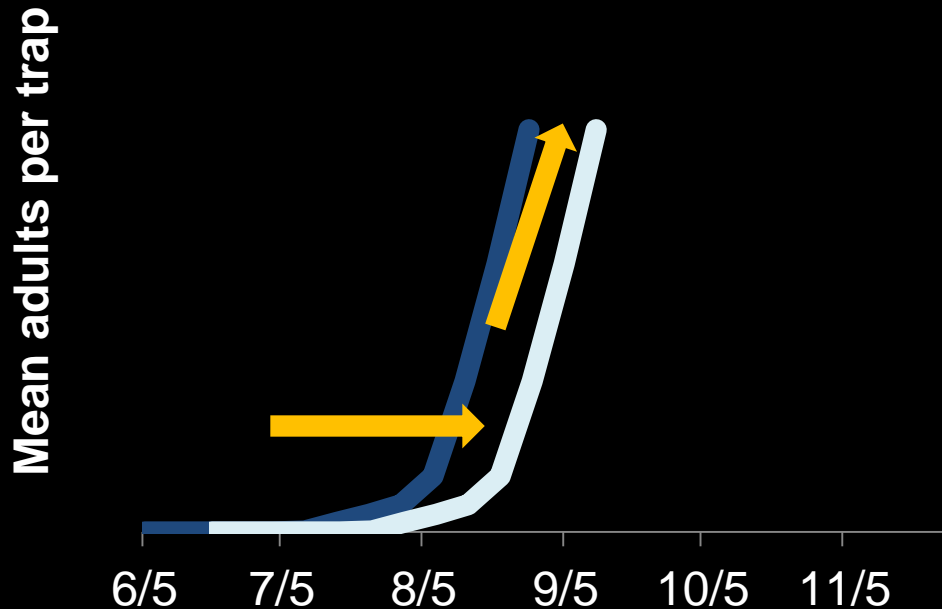
- 1st Detection of Spotted wing is earlier at farms with **high woodland area**
- Population growth is the same between farms with either **high or low woodland area & edge**



Woodland Area + Edge + Quality + Abiotic

Implications

Farms in landscapes with more woodland area may be at a greater risk for early season infestation.



Questions?

In future studies, we should examine the mechanisms driving the effect of landscape

However, landscape doesn't affect population growth rate. Other measures? Drivers?