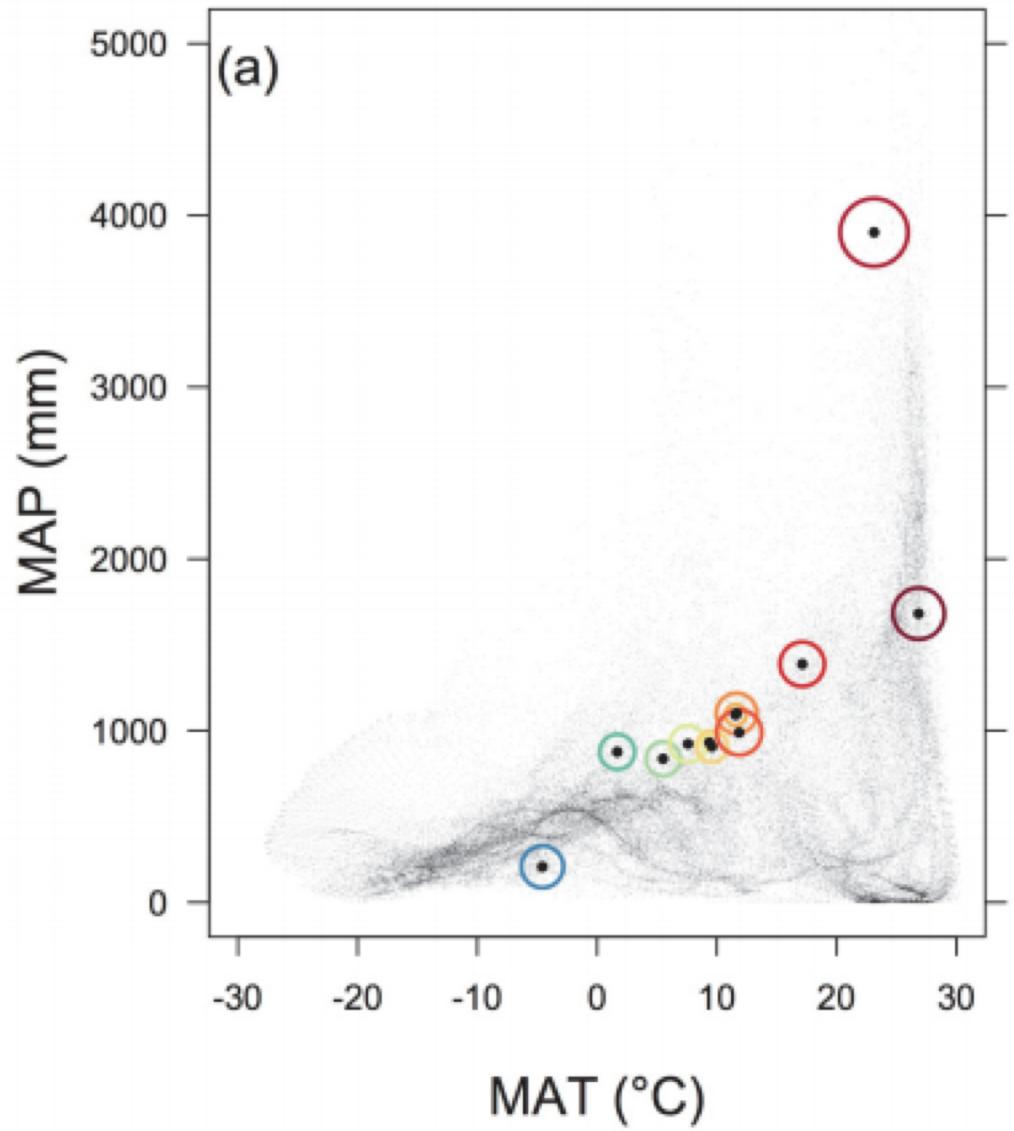


# Drivers of Leaf Carbon Exchange Capacity Across Biomes at the Continental Scale

Smith and Dukes (2018)

*Ecology*

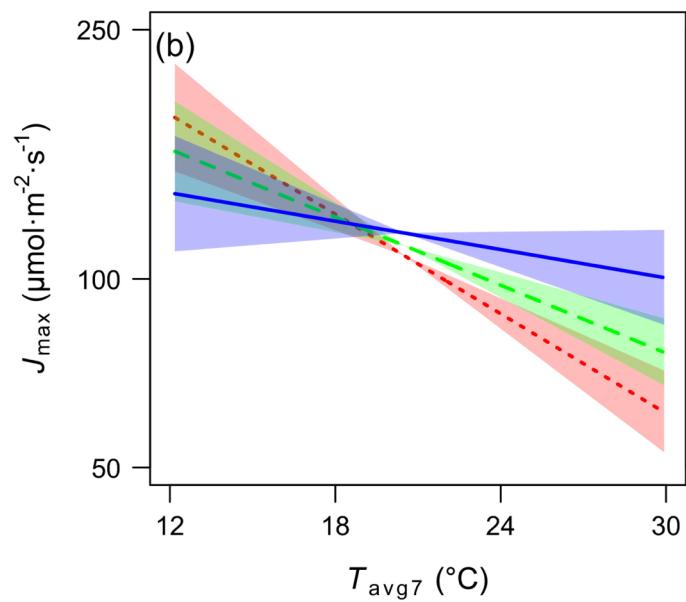
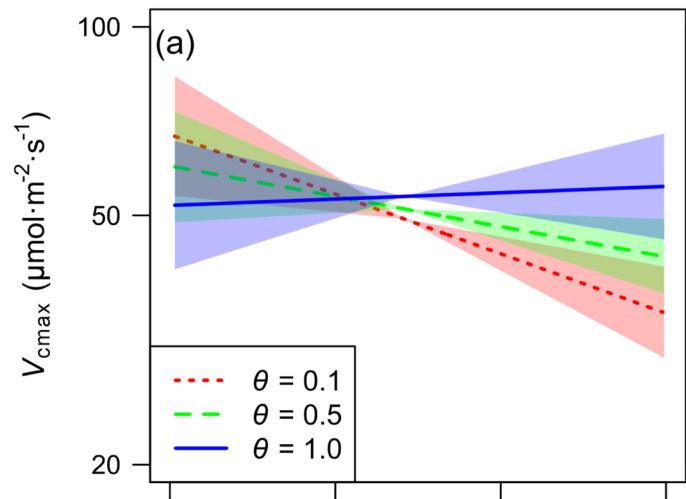


<u>Traits</u>
- $V_{cmax}$
- $J_{max}$
- $R_d$
- LMA
- Leaf N
- LWP
- Height
- DBH
- Life history

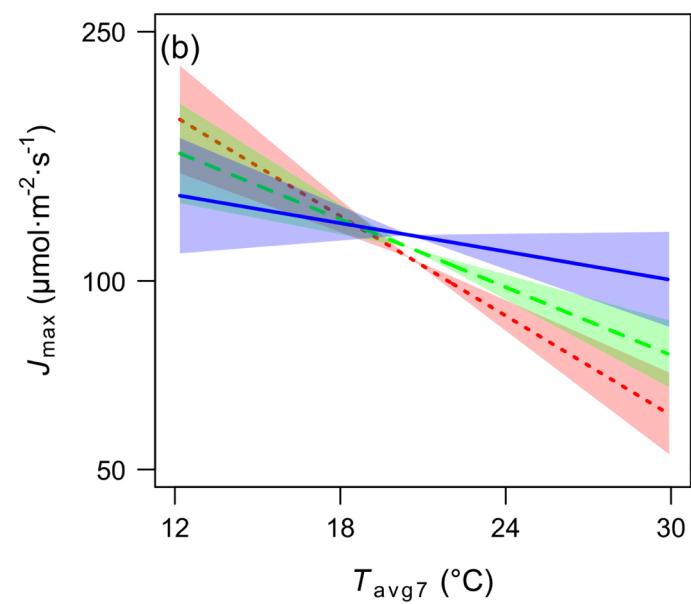
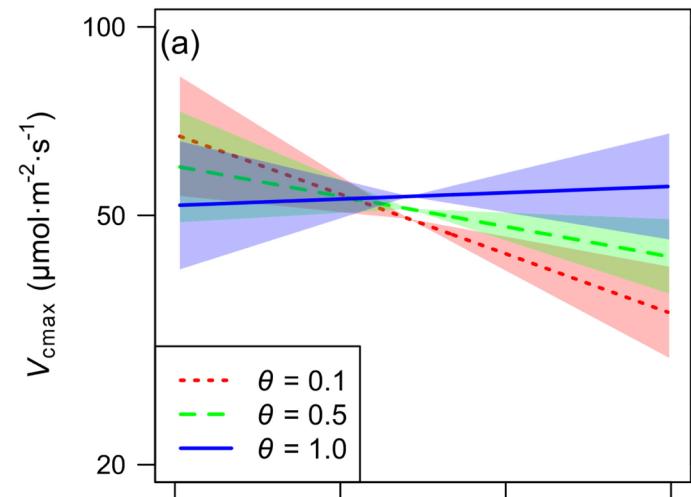


Questions on methodology?

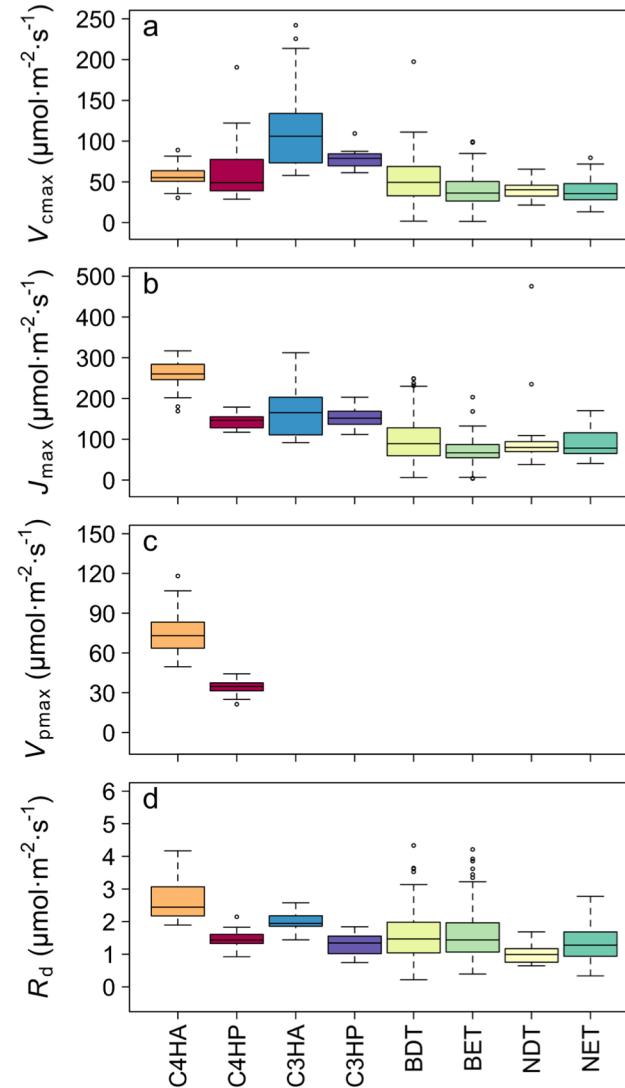
# Dry/hot conditions reduce photosynthetic capacity...



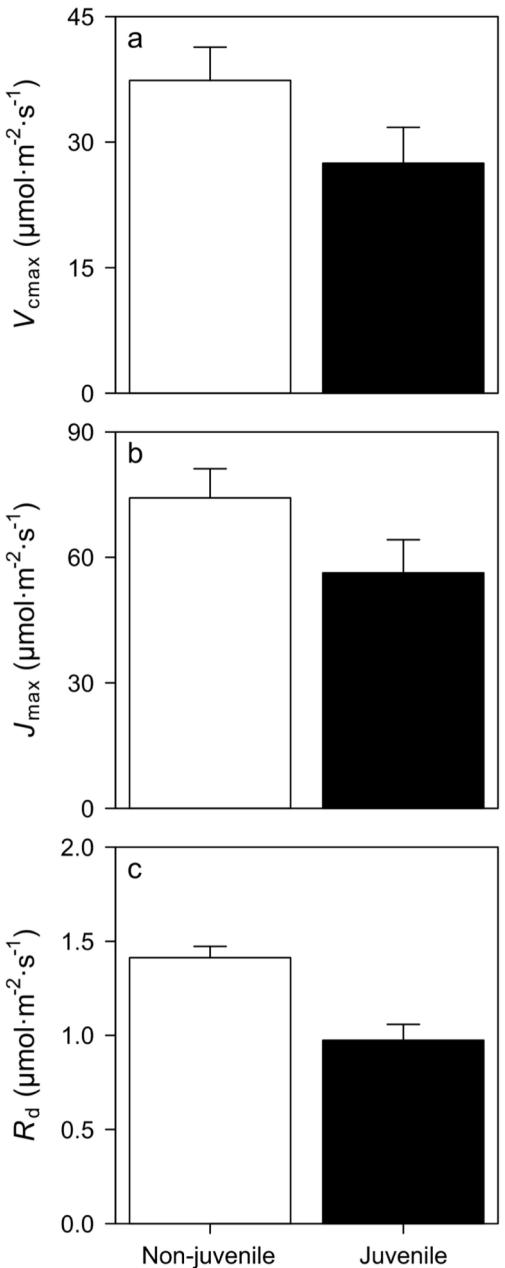
...and plants are responding quickly



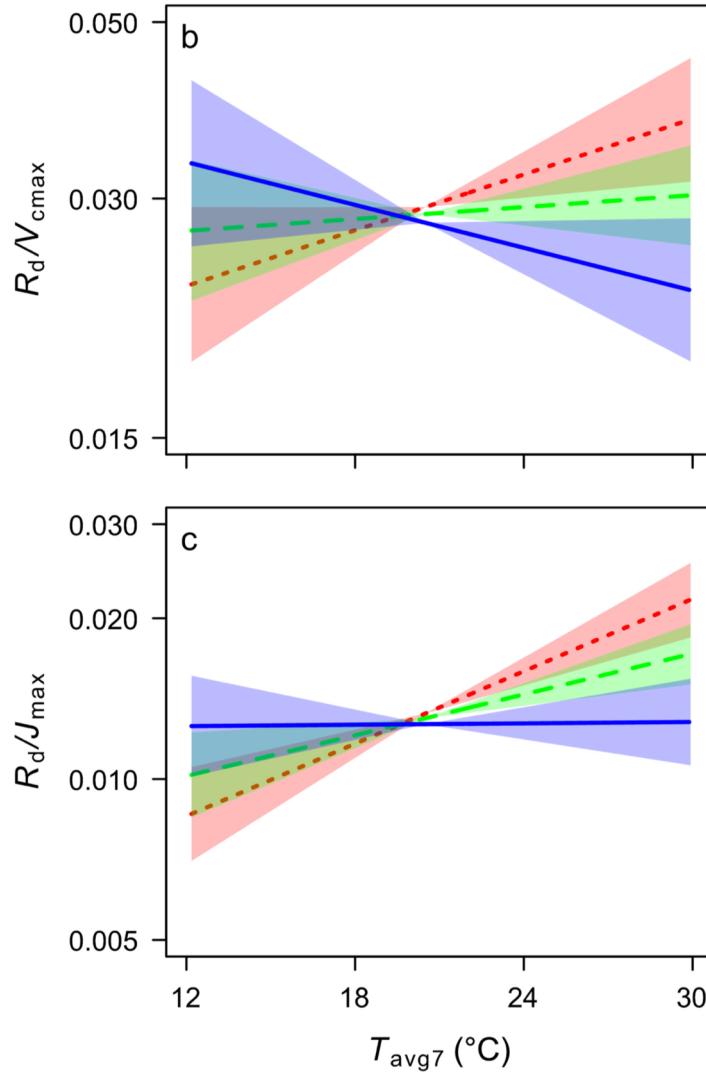
# Fast plant types tend to have faster traits



# Juveniles are “slower” than adults



# Hot dry conditions reduce net carbon gain



Any other big takeaways?

Where in the world would you  
expect the fastest  
photosynthesis?



Where in the world would you expect the most photosynthesis?



Does this vary over time?



How will photosynthesis change  
in the future?



