

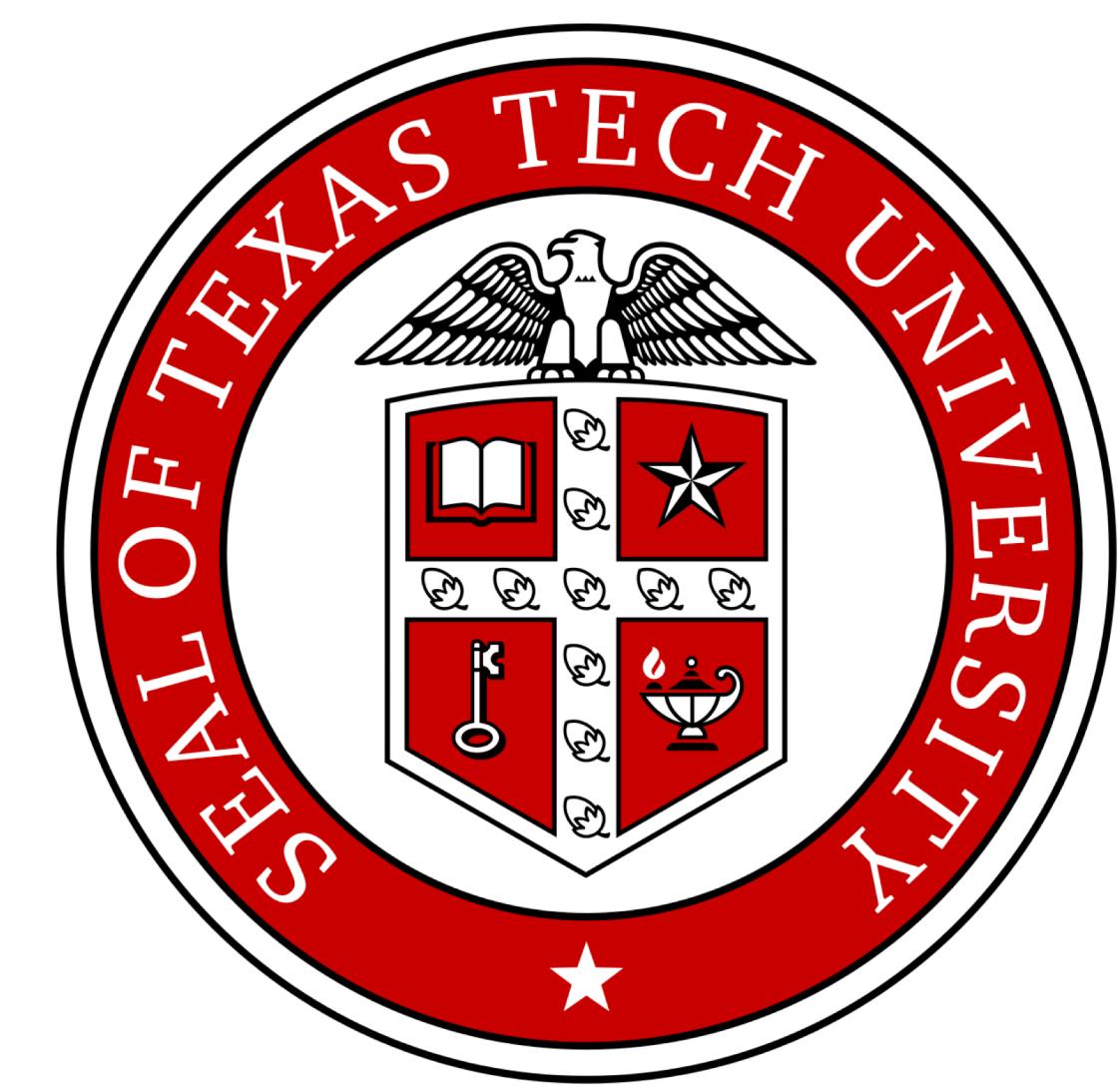
Mesquite alters community structure, but not diversity in shortgrass prairie



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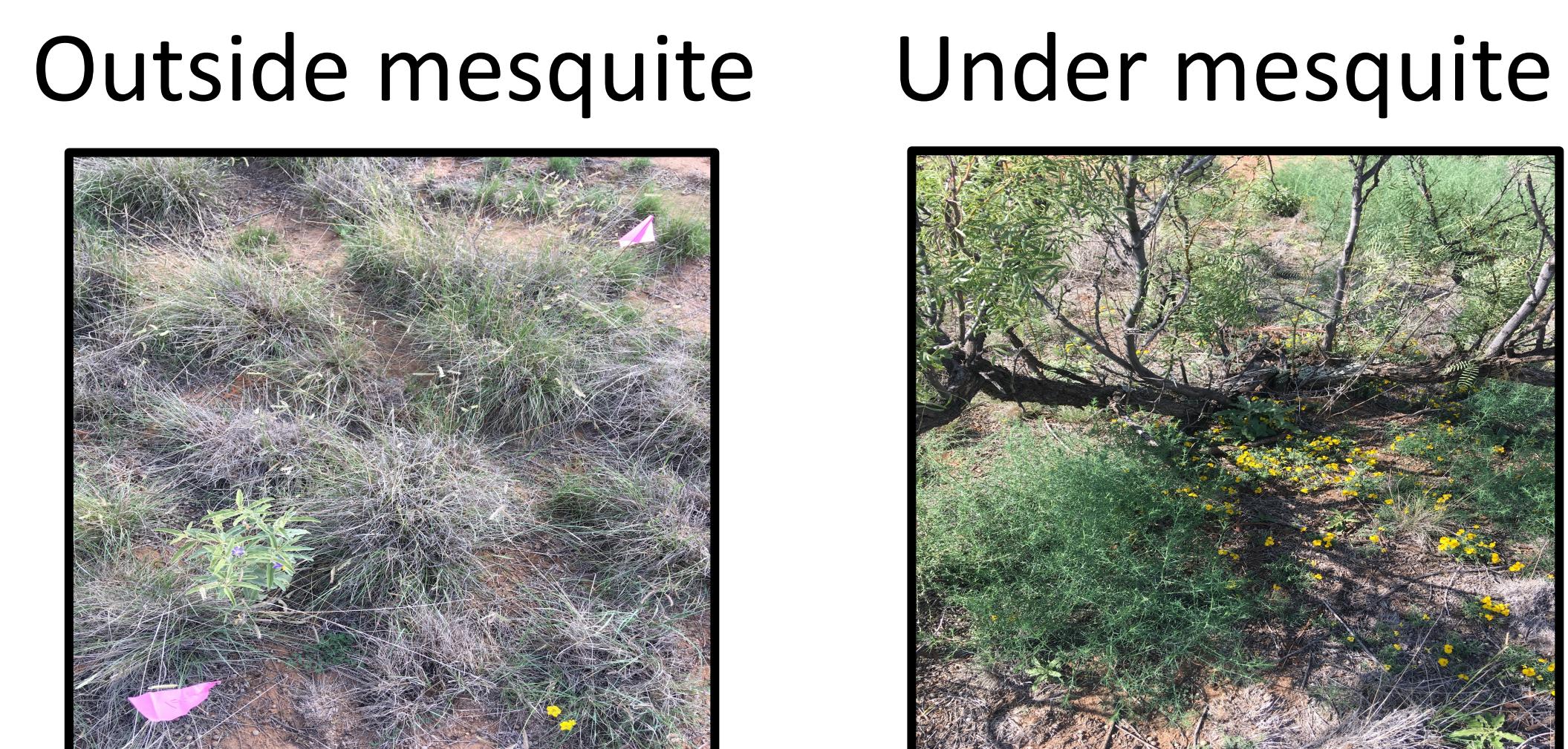


Mesquite: an invasive species in southwestern grasslands



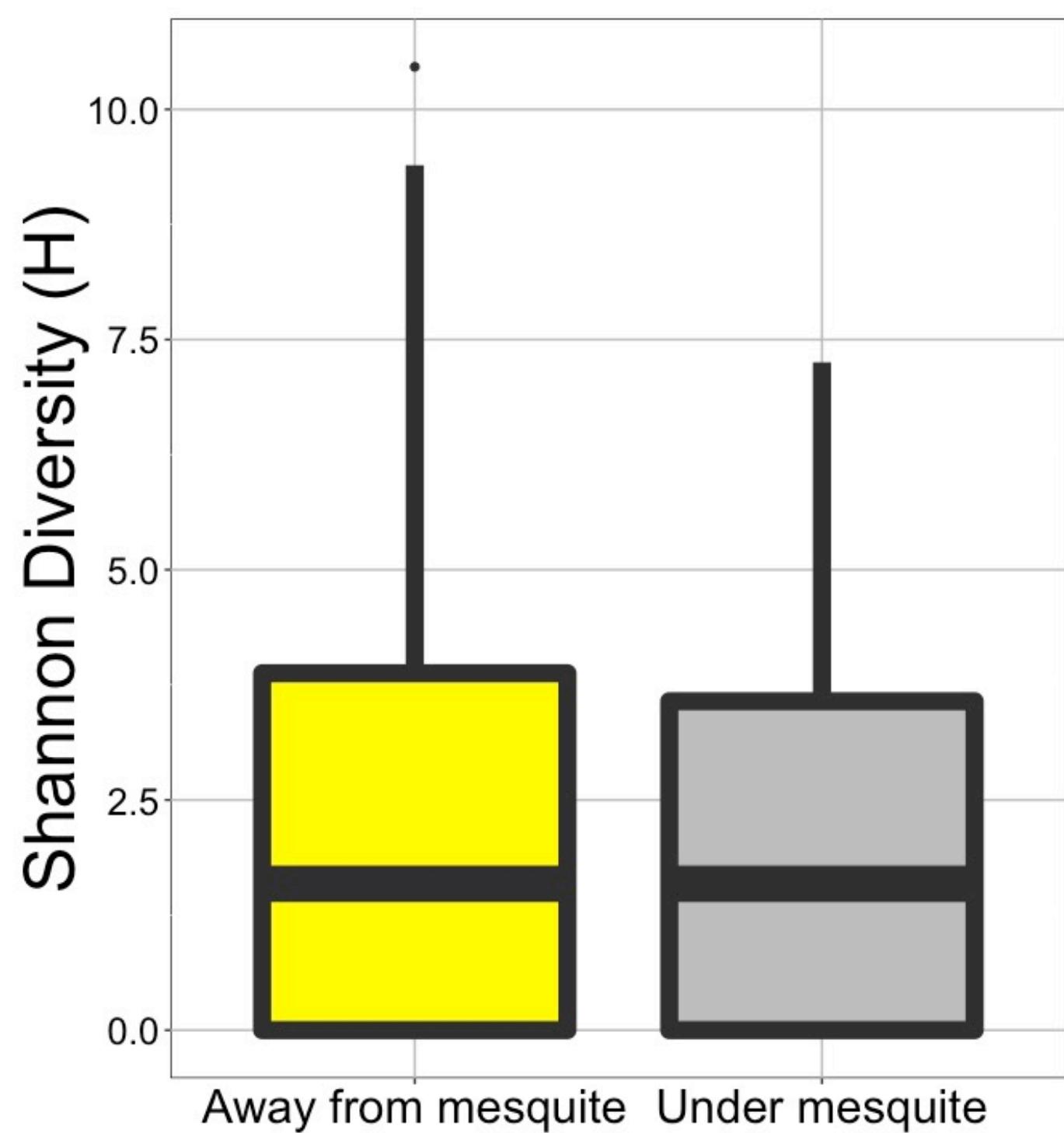
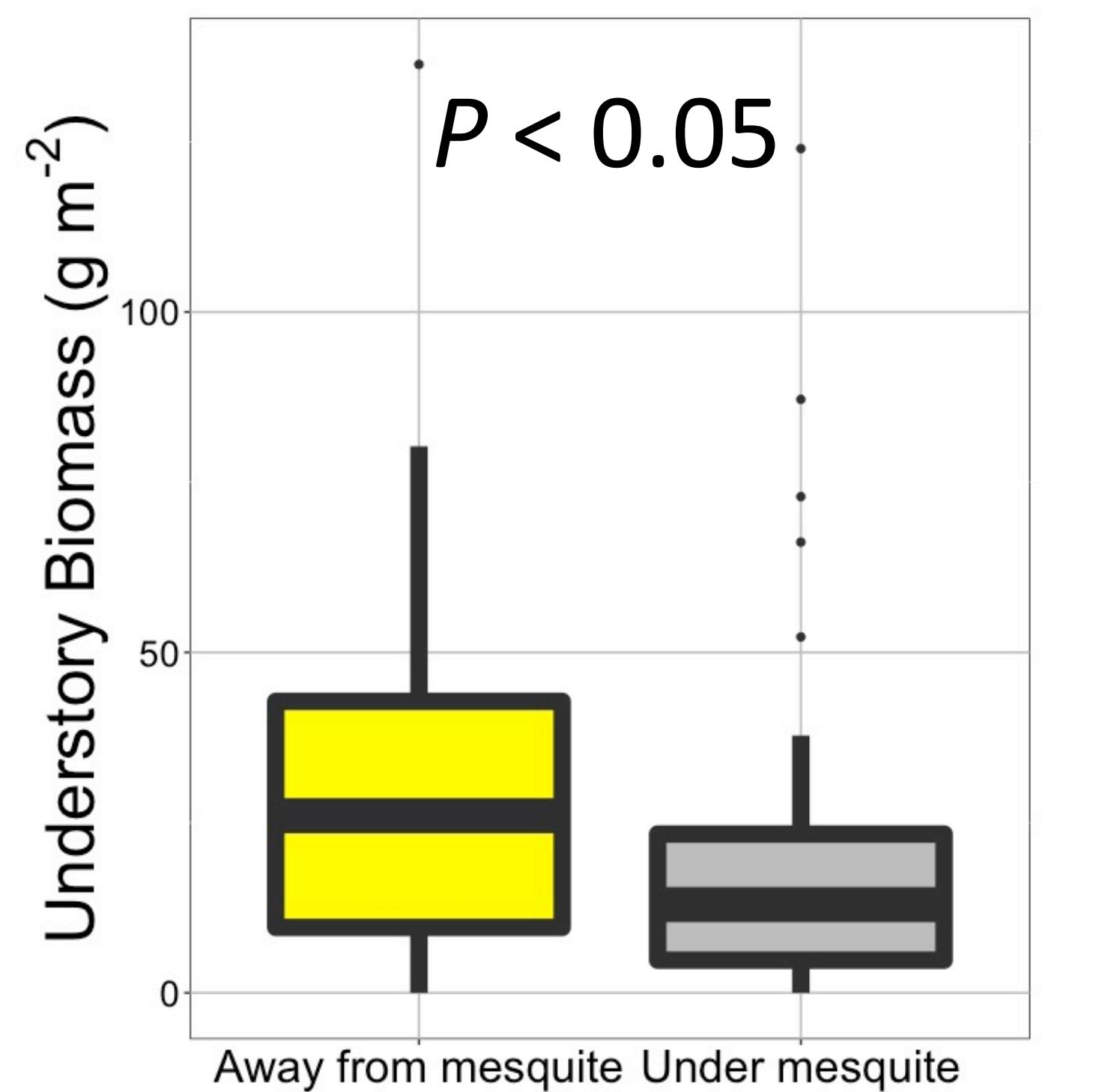
- In Texas, mesquite cover is increasing at 2.2% per year
- Little is known about the ecosystem impact

Methods

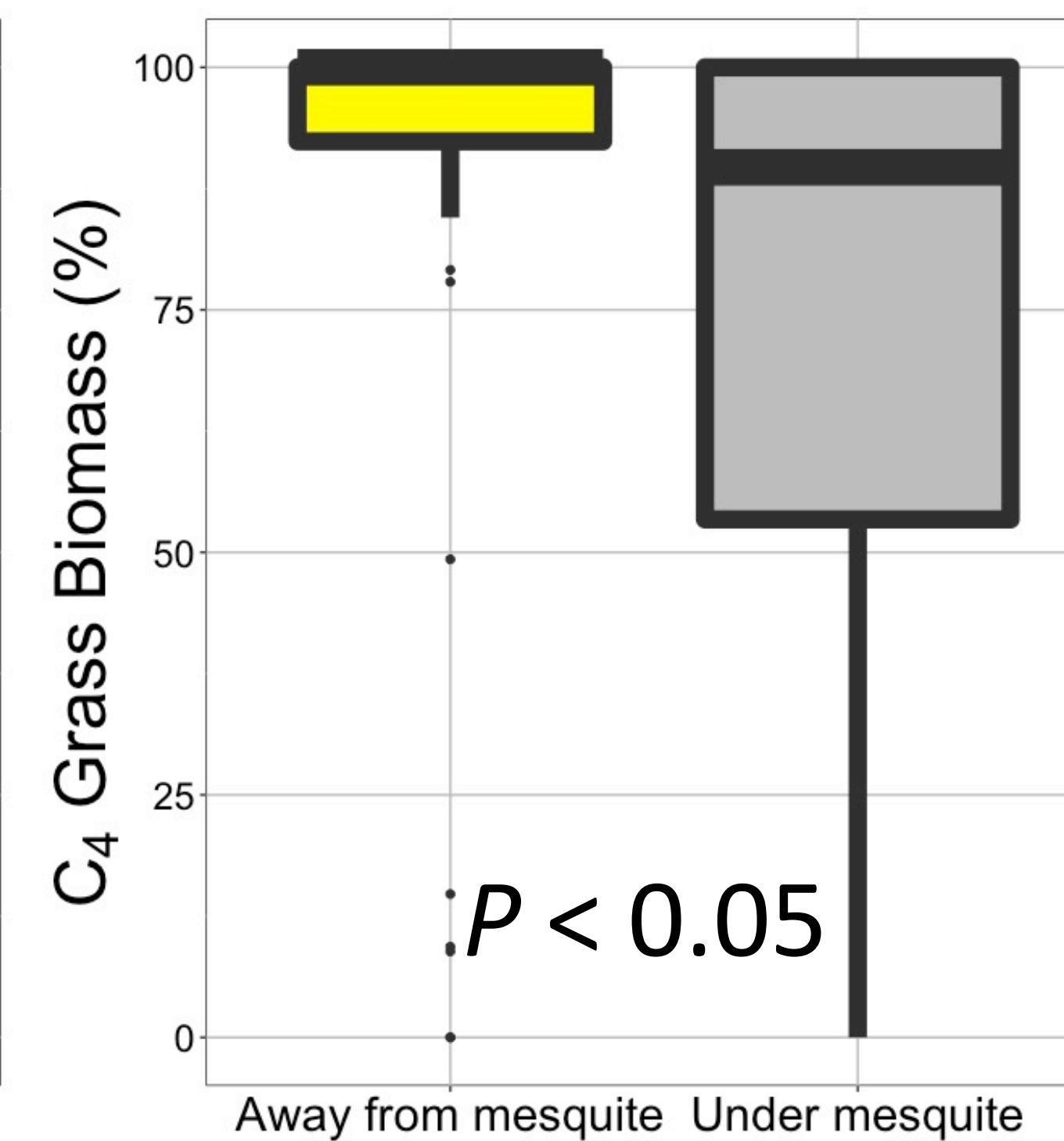
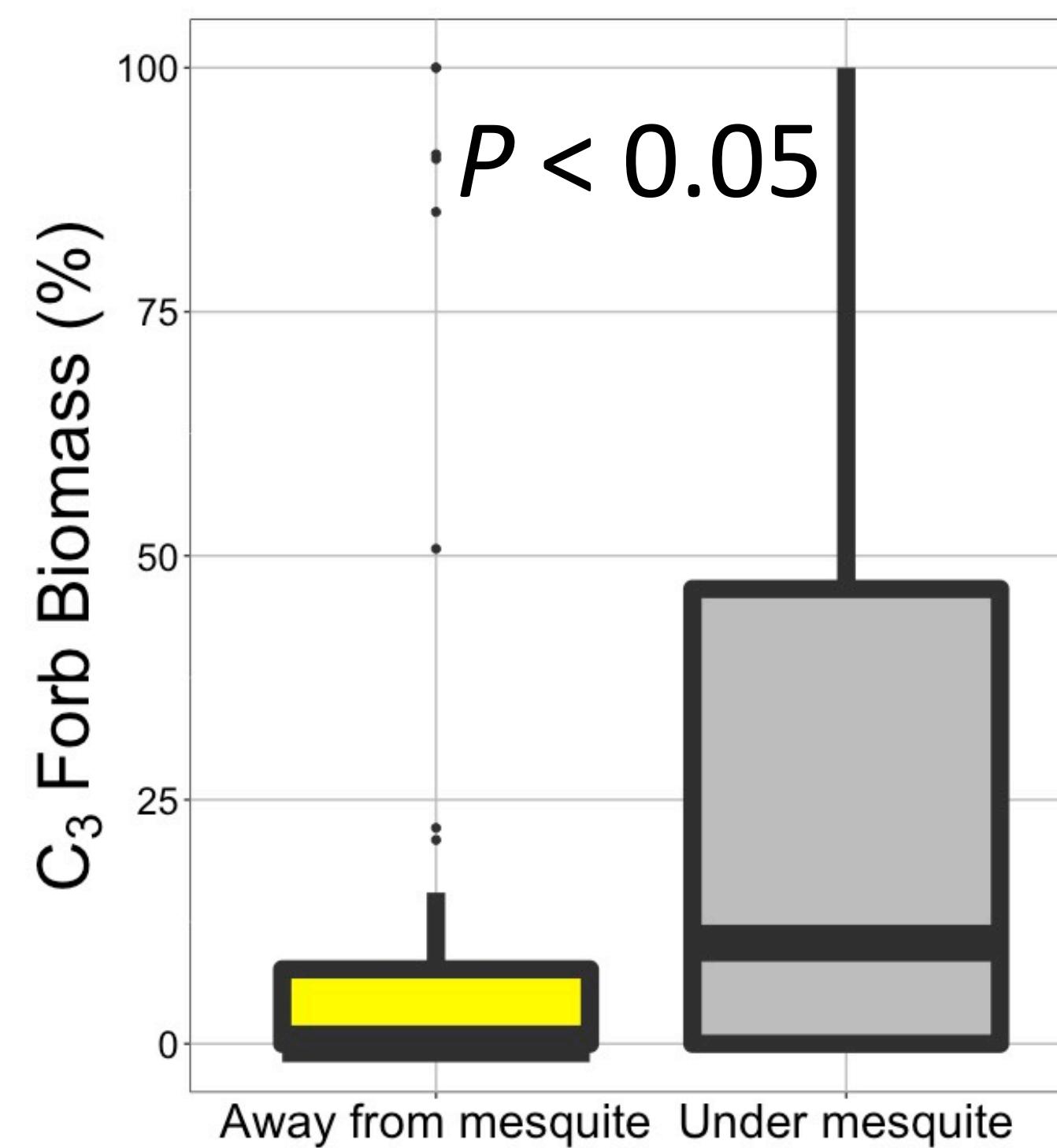


- 40 paired rangeland plots
- Plant community: biomass and community composition
- Microhabitat: soil moisture

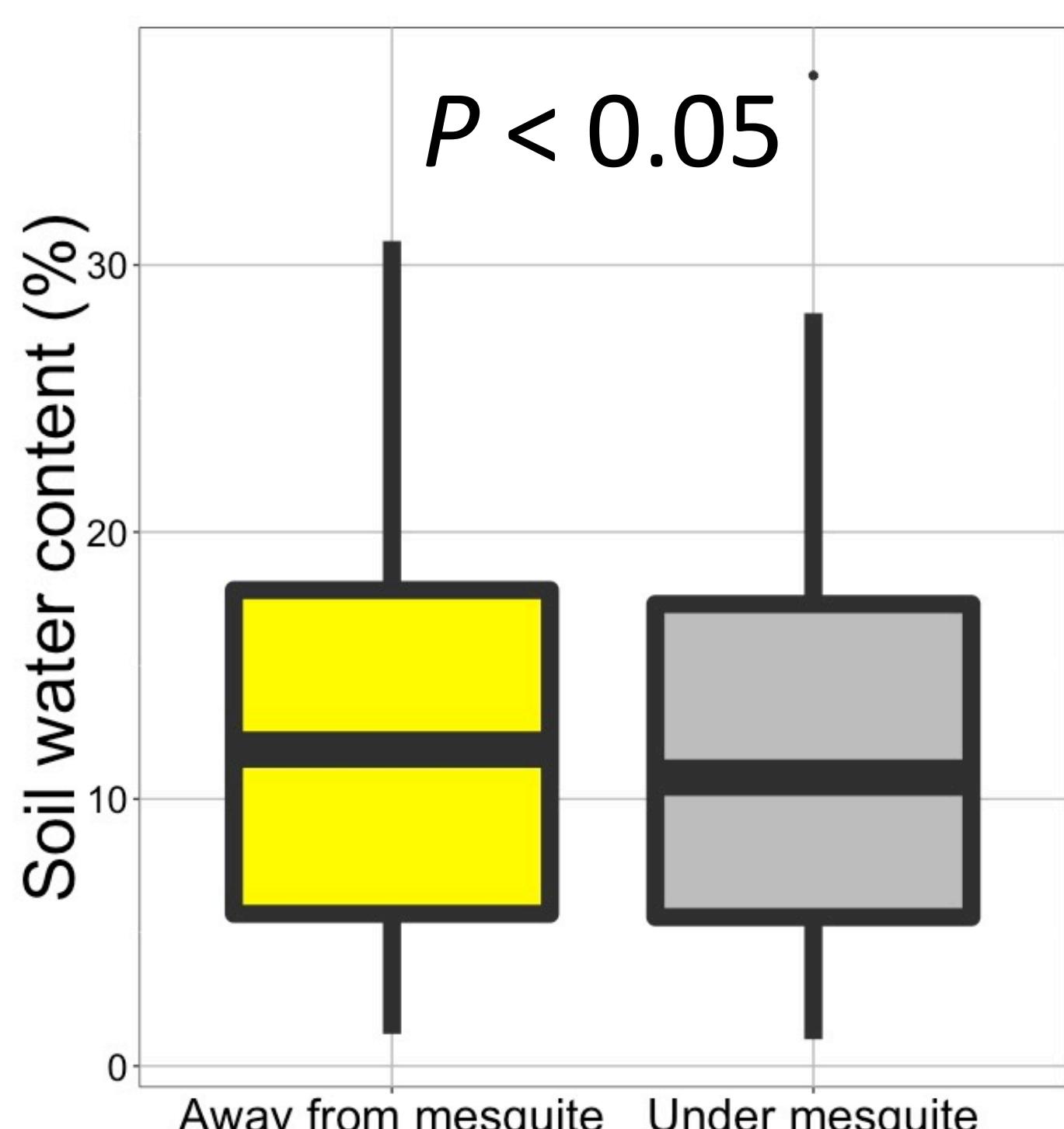
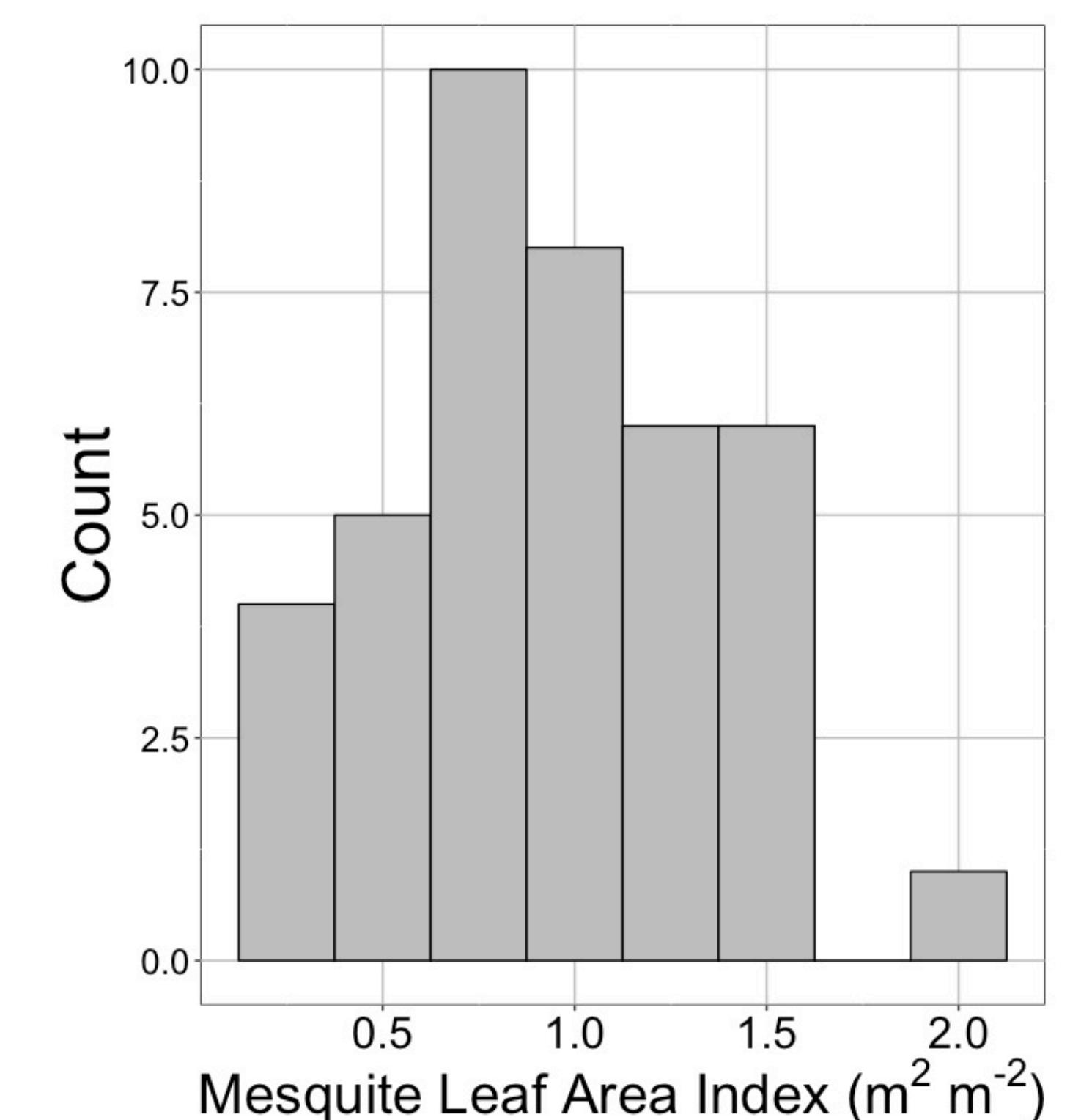
Mesquite reduces understory; has no effect on diversity...



...but favored C₃ forbs and reduced C₄ grasses



Mechanism: decreased light availability and soil moisture



What does this mean for the system moving forward?

- More total productivity (mesquite = $> 800 \text{ g m}^{-2}$)
- No loss in plant diversity
- A whole new community of plants
- Cascading effects unknown