

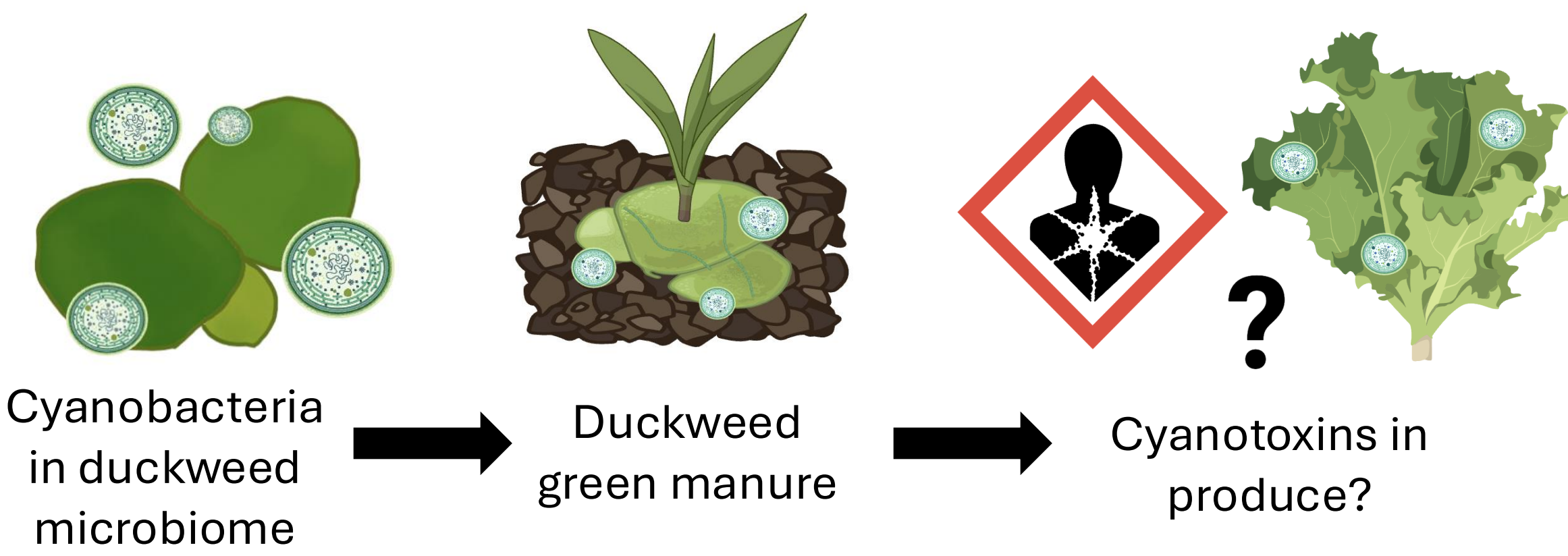
From Ponds to Produce: Exploring the Effects of Toxic Cyanobacteria in Green Manure Microbiomes

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Background

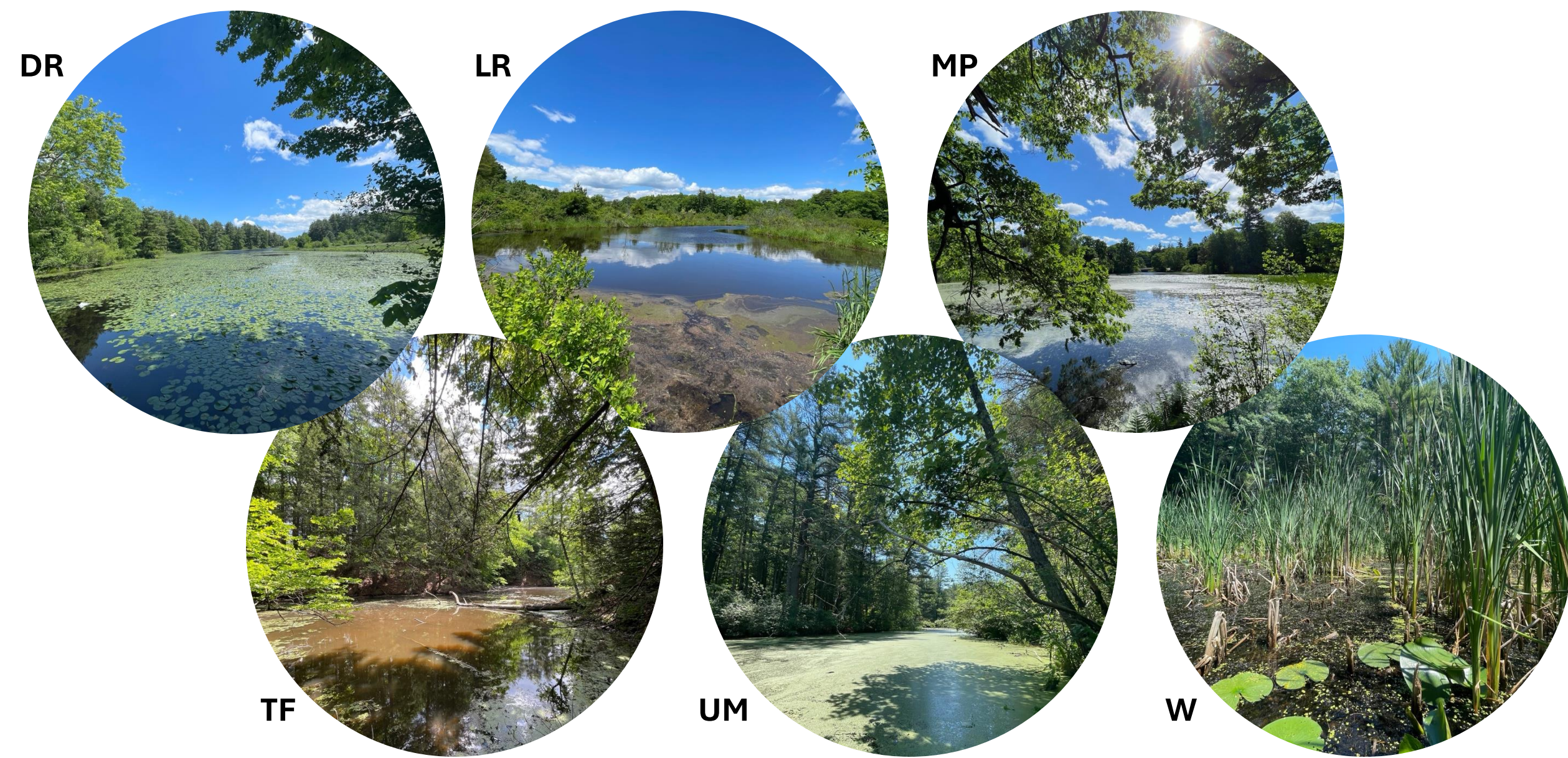
- Conventional fertilizers leach from soils, reducing their efficacy while contaminating waterways
- Green manures offer a sustainable, slow-release alternative
- Floating aquatic plants like duckweeds may be useful green manures
- However, toxic cyanobacteria associated with aquatic green manure plants may pose a human health risk

Do cyanobacteria affect green manure quality?
(toxicity, biomass, nutrient recapture)

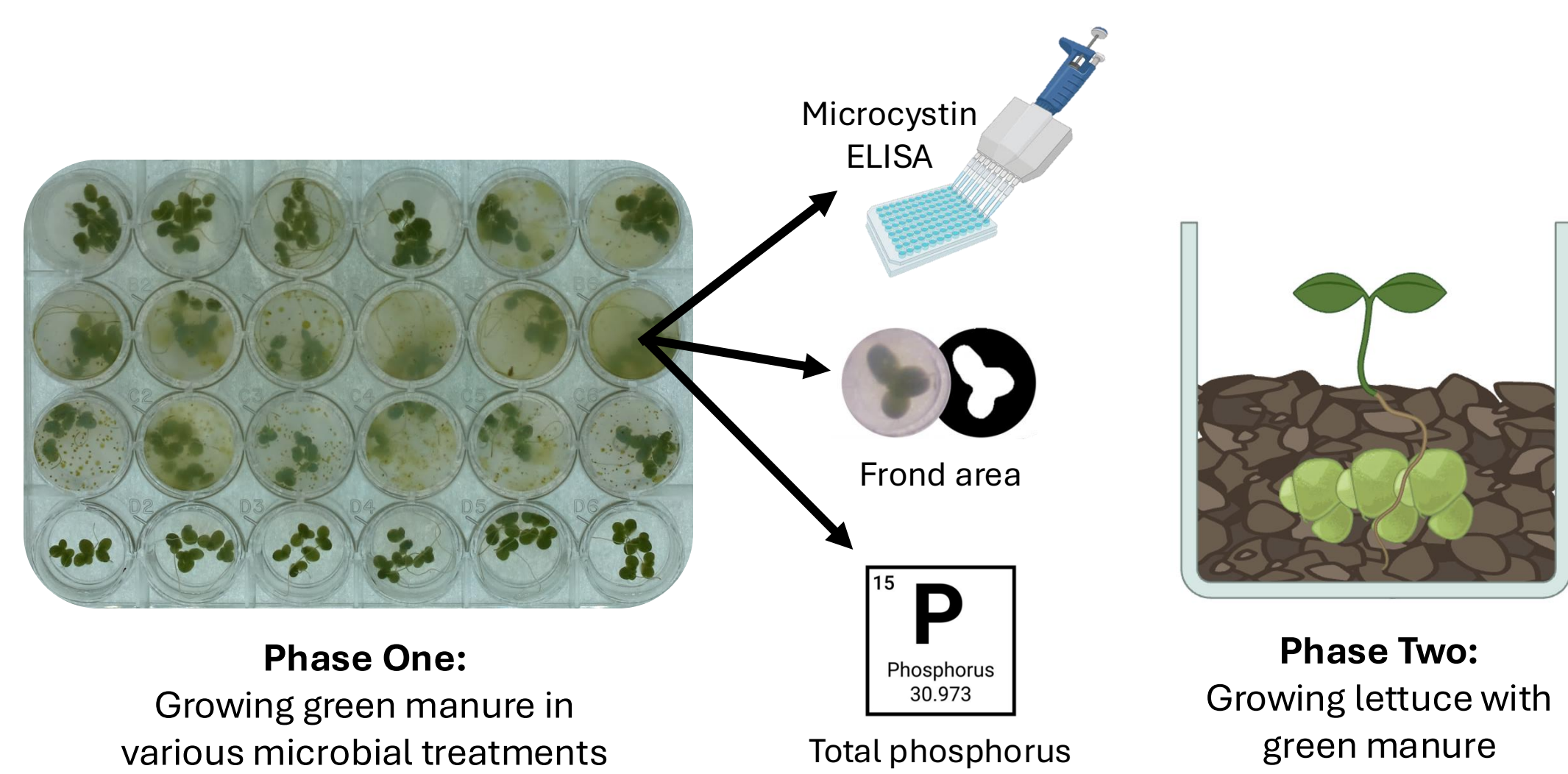


Methods

Duckweeds from 6 locations (genotypes):

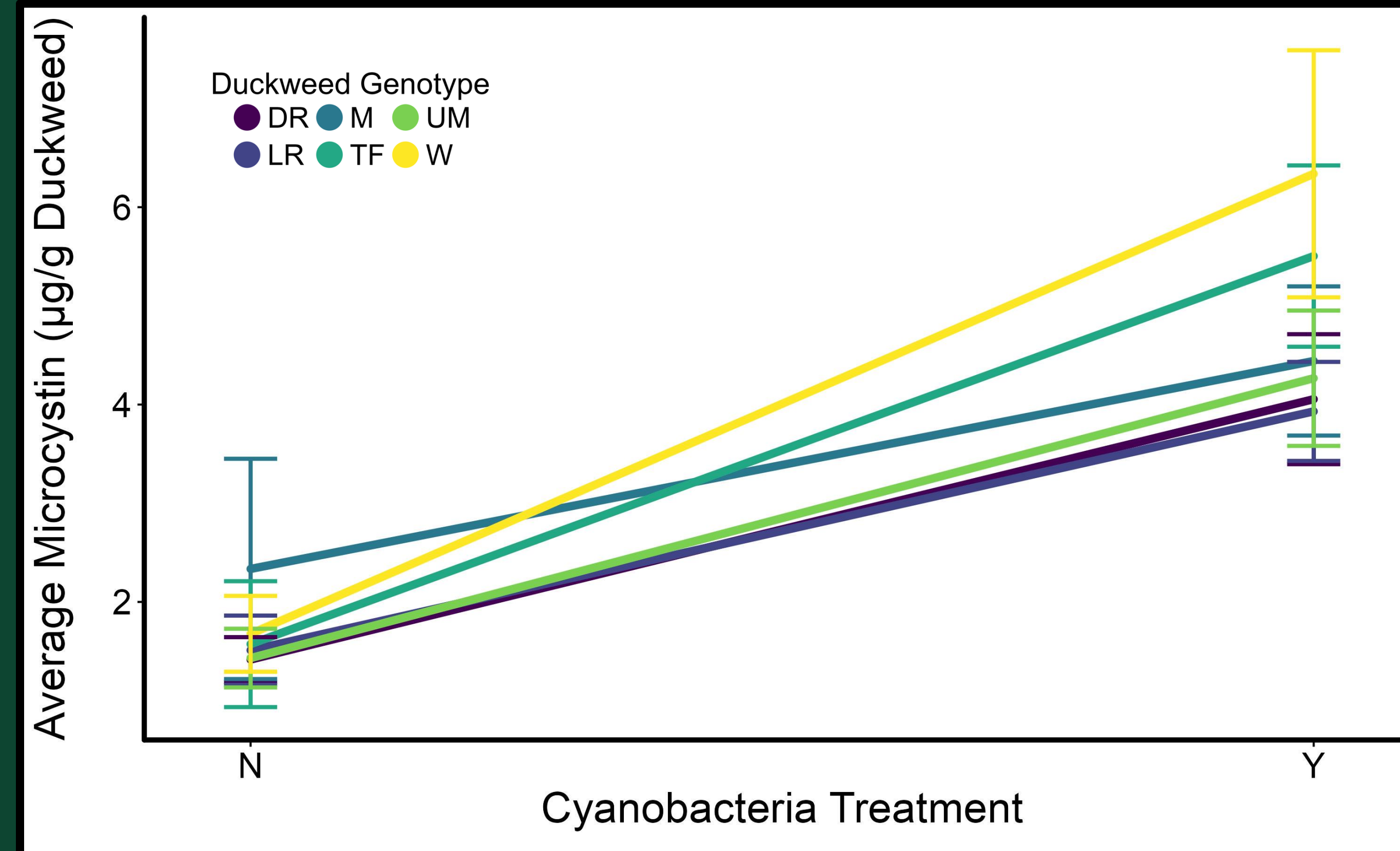
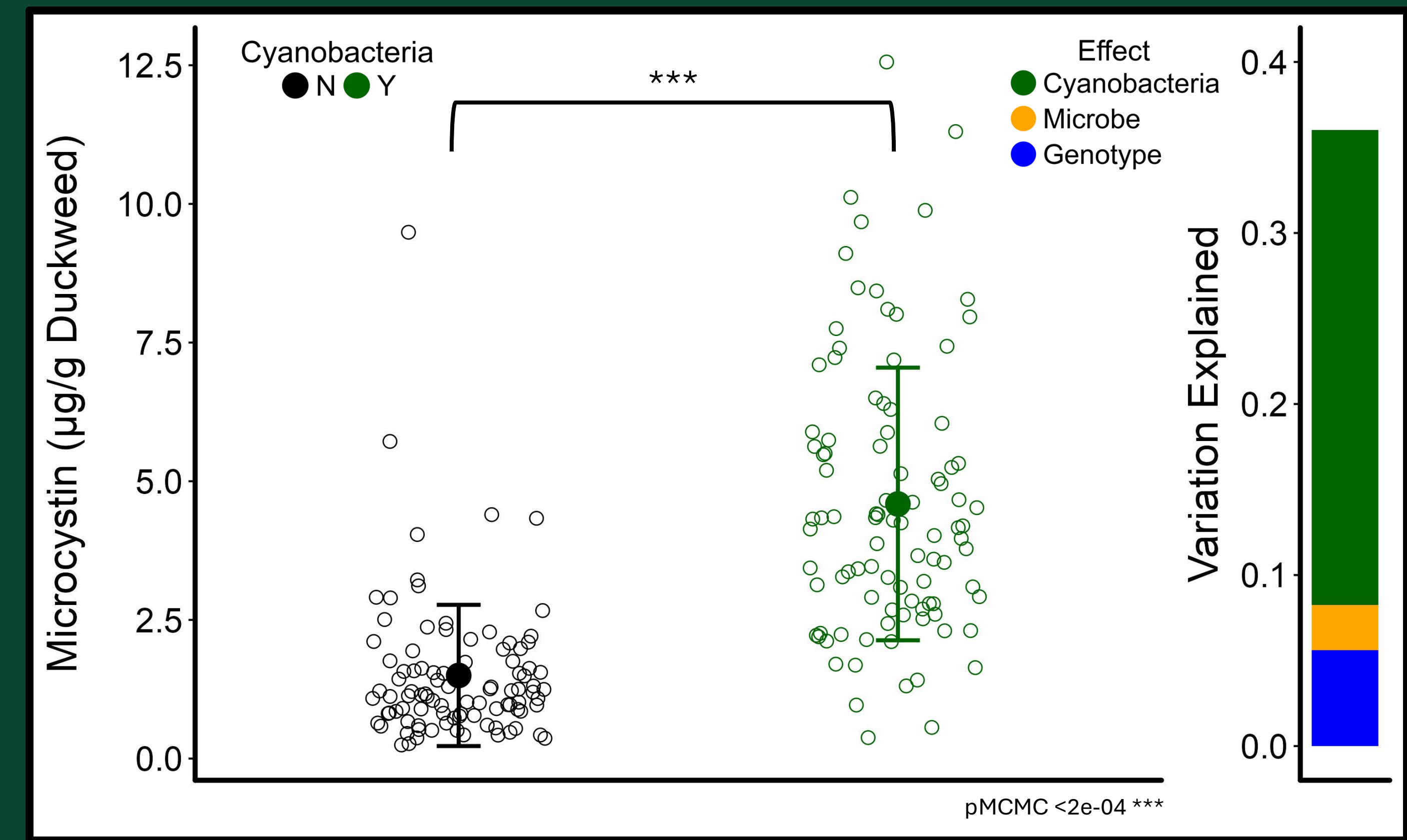


Crossed with:



1

Microcystins translocated into duckweed tissue

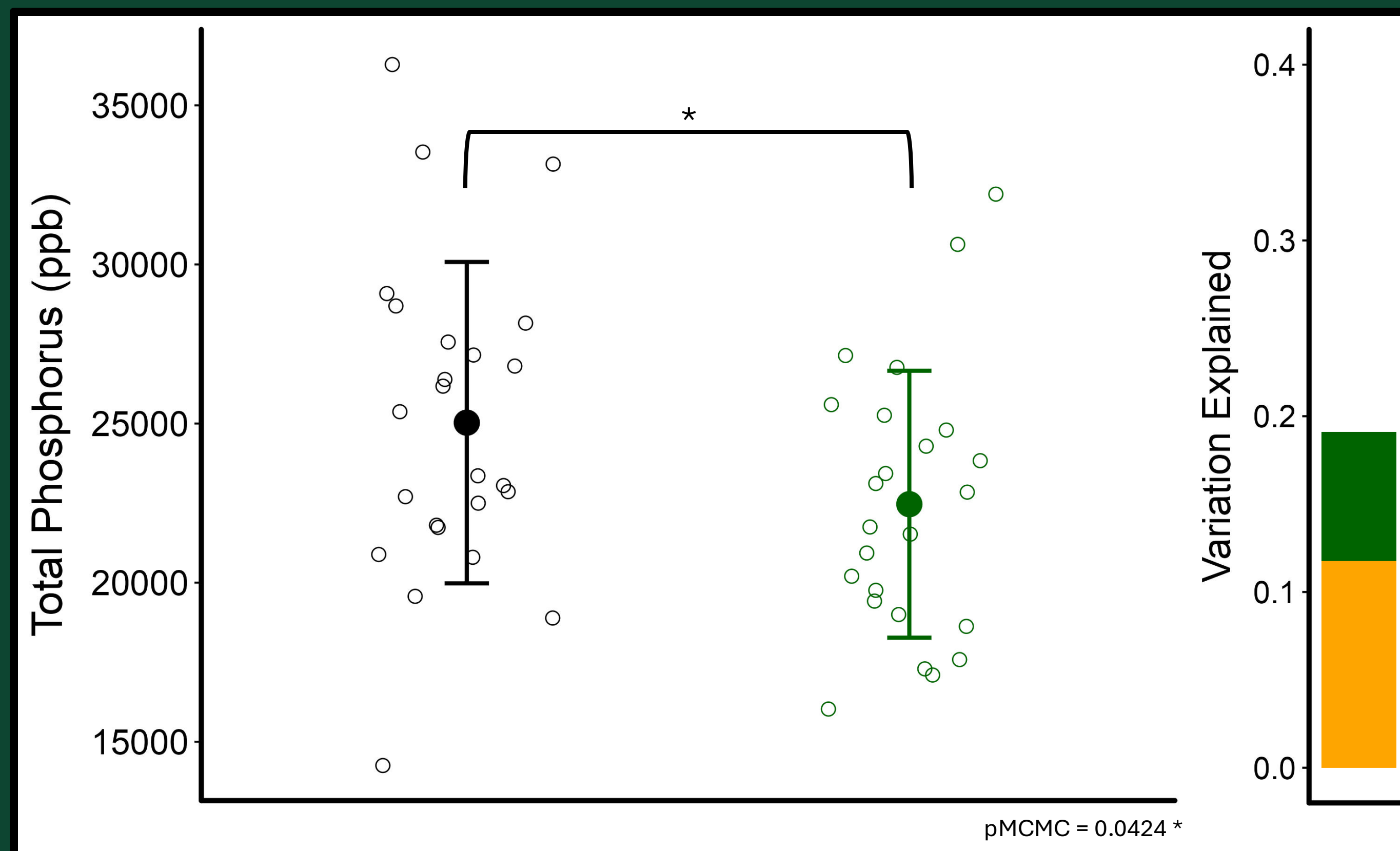
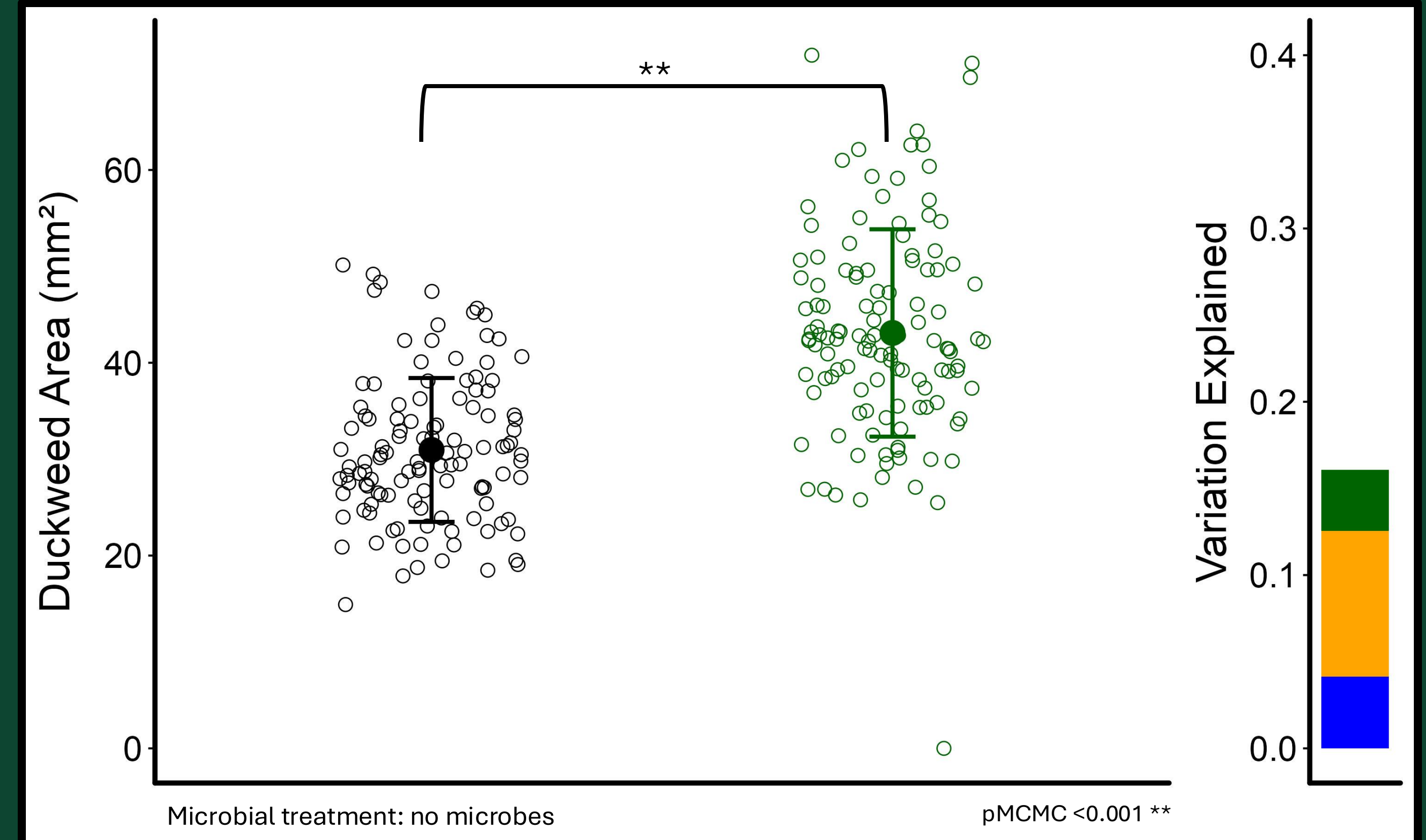


Some duckweed genotypes accumulated less microcystins

2

3

Adding cyanobacteria positively affected duckweed growth in the absence of other microbes



Adding cyanobacteria increased phosphorus removal

4

Acknowledgements

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