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Root Endophyte Community Response to Increased Resource Availability

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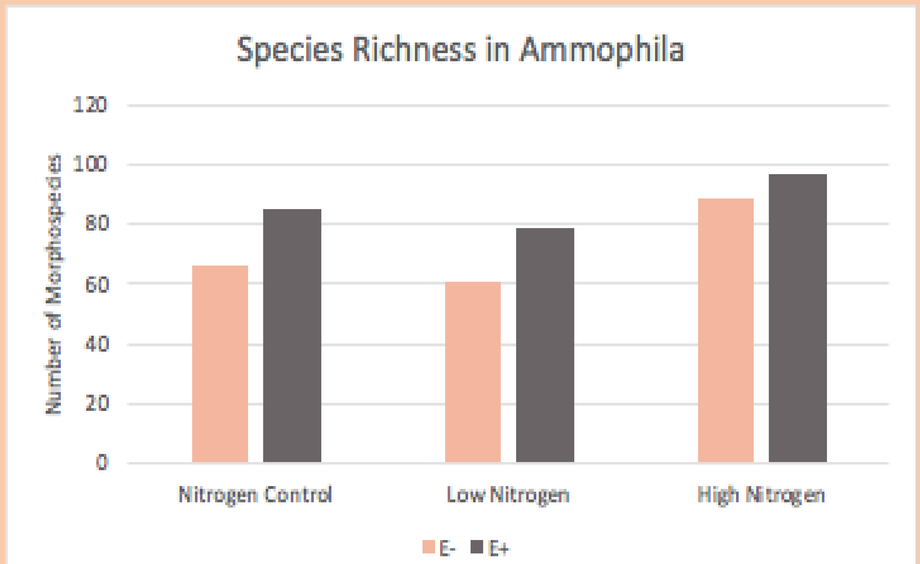
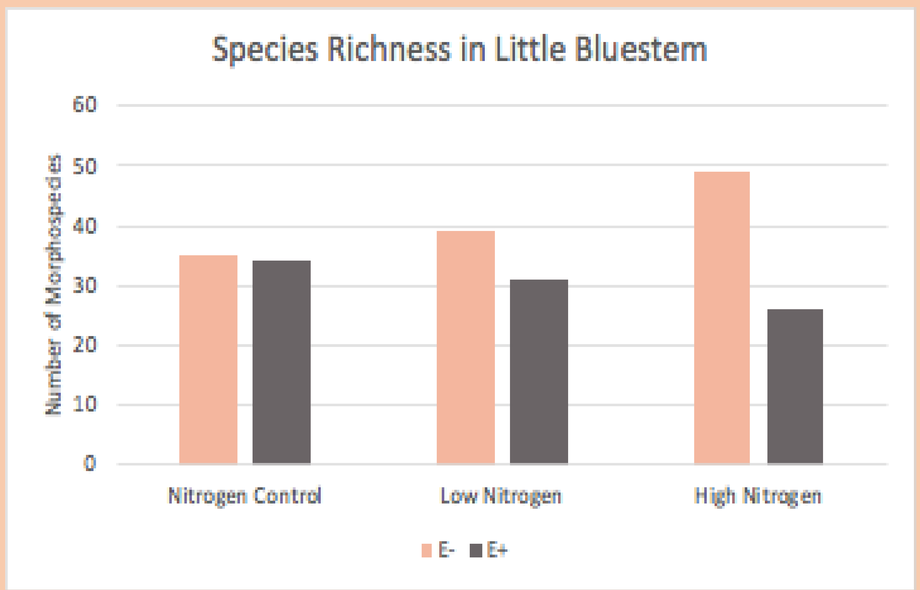
Questions

- How does increased resource availability and Epichloe leaf endophyte infection affect plant mycobiome interactions?
- How does nitrogen deposition affect species diversity in root fungal endophyte communities?
- What are the broader implications of nitrogen deposition on species diversity?
- Does endophyte species richness differ between primary and secondary successional dune grass species?

Methods

The root endophytes were plated in standard media and then sub-cultured to isolate each morphospecies.





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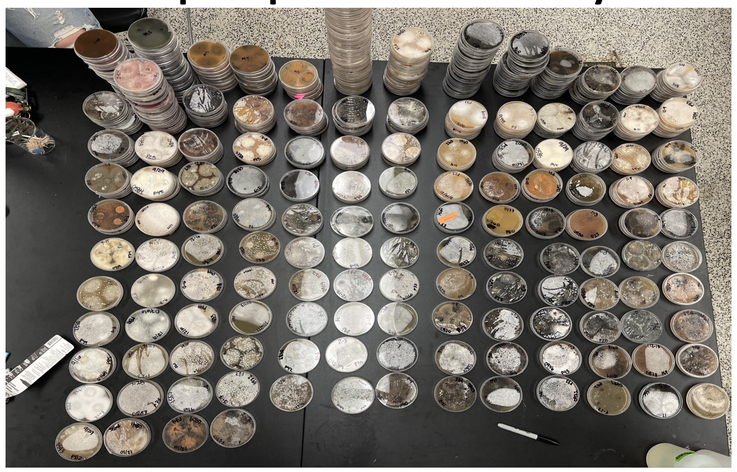
Morphospecies Community



136 morphospecies were isolated. Here they are represented in abundance where higher stacks are most common ranging to rare species of only one isolate.

Results and Implications

- Ammophila has greater species diversity than Little Bluestem

- Little Bluestem plants without Epichloe have more fungal species than plants with Epichloe in all three nitrogen treatments

- High nitrogen treatment in Ammophila yields the greatest species diversity

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