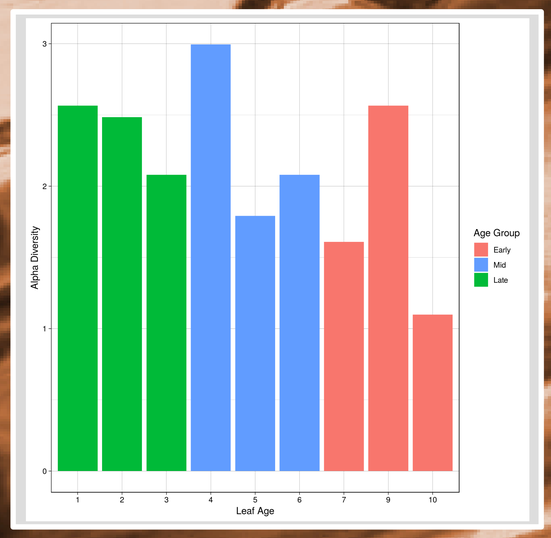
Fungal endophyte communities during leaf senescence

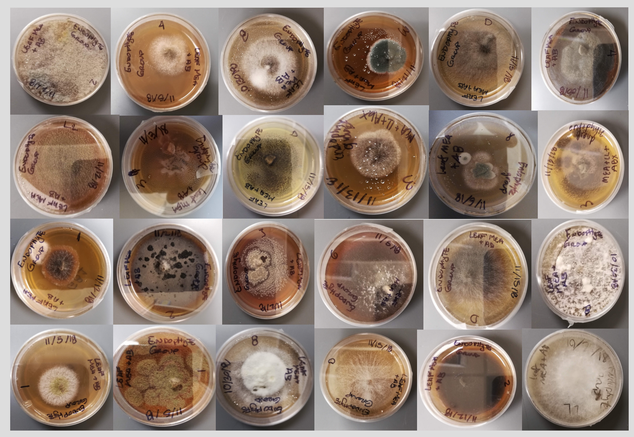
Garrett Matthews, Parker Willett, Hailey Sommerfeld, Geoff Zahn

Endophytic fungi live inside plants' leaves. These fungi often confer many benefits to their host plant, even as acting as a form of "immune system" for the plant. **But what do the fungi get out of this relationship?**

One idea is that fungi are just waiting around for the leaf to die so they can be the first ones there to start decomposing fallen leaves.

This study investigated this "latent decomposer" hypothesis by looking at whether a community of endophytes present in healthy leaves were the same as those decomposing dead leaves.





Endophyte isolations

METHODS

Leaves in varying stages of senescence were taken from a single mulberry tree on UVU's campus.

Fungi were isolated from these leaves and the ITS1-28S region of rDNA was sequenced to determine species identities.

Fungal endophyte communities were compared along a leaf age gradient

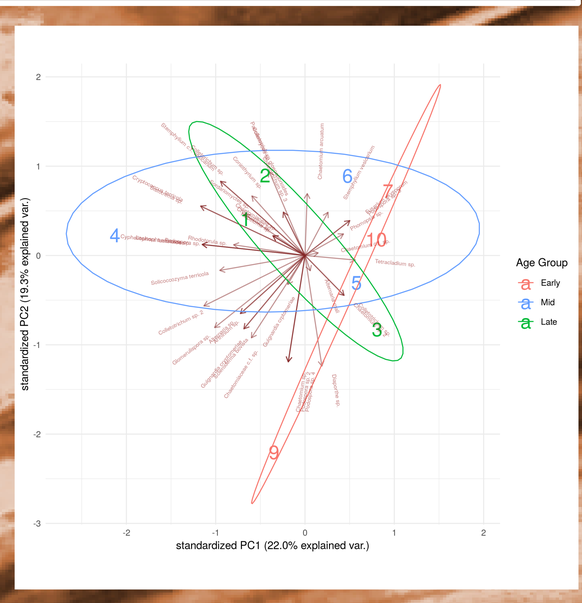
RESULTS

There was no significant difference between endophyte communities between leaf ages. Diversity of endophyte communities did decline with leaf age, though.

The data suggest that endophytes may indeed be latent decomposers. However, this is only a small sample in a wider world, meaning more research is required to gain a better understanding of the situation

Principle component analyses demonstrated significant overlap in endophyte communities. No single species drove observed differences between age groups.

The fungi decomposing the leaves appear to be the same ones in healthy leaves



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