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Best Birch Tree Conditions

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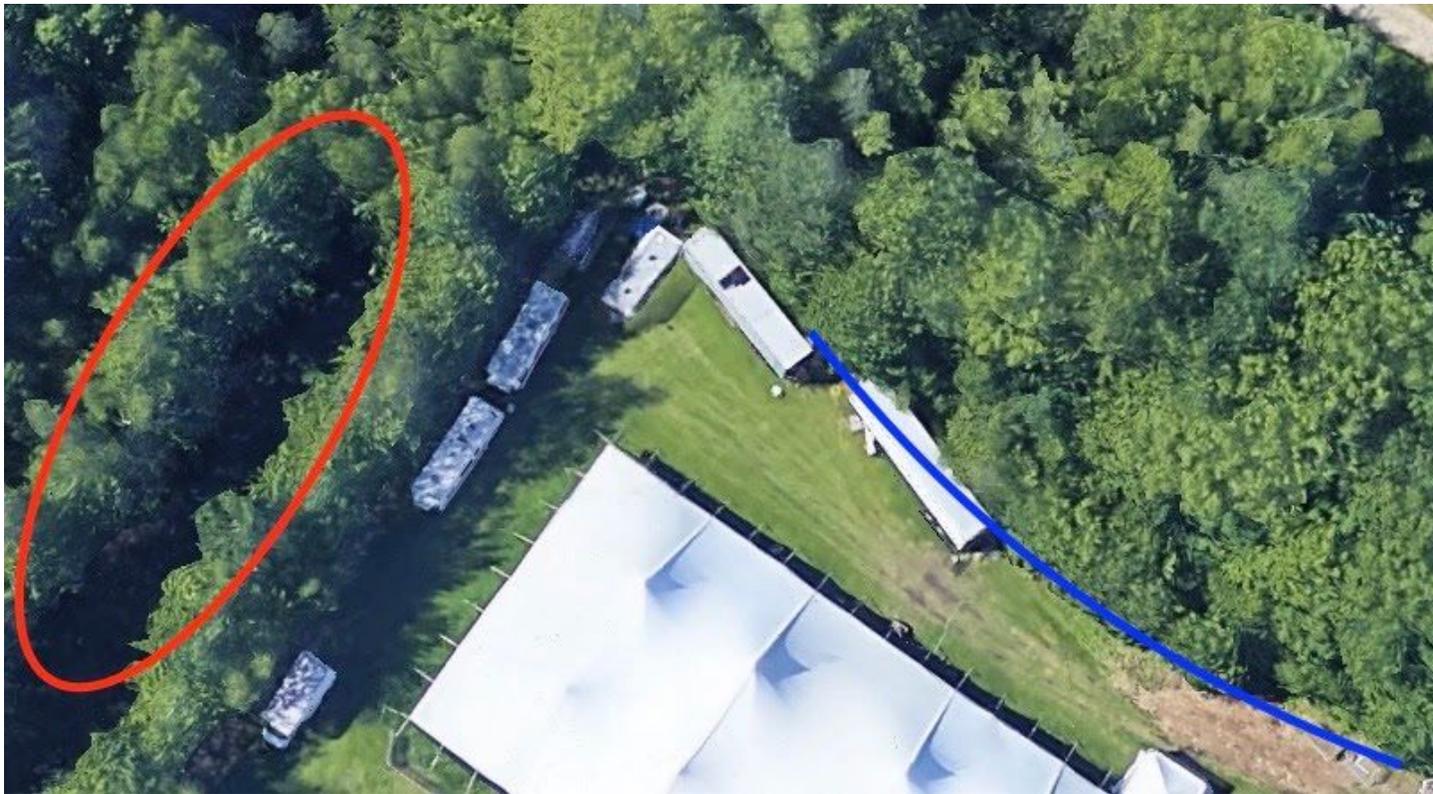
It was a cool day, the bare branches clicked as the breeze moved through them. The early morning fog had already settled, leaving behind dew that sparkled like little diamonds as the sunlight peeked through the grey clouds. I went outside with my class to make observations on 10/11/20 late morning. Outside I walked through a trail between my school's soccer and football fields. While I was about 30 feet into the woods a tree sparked my attention. It was a birch tree. It had 8 trunks though one of them was broken at the base and others looked like they were rotting from the inside out. At first there was nothing at all remarkable about the tree, but when I started to look around I got curious. All the trees that I could see were tall fat trunked trees, white and red oaks, near the edge of the trail there were a few small deciduous trees but that was about it for variety. I kept the birch tree in the back of my mind as I continued to walk around the trail. It wasn't until my class walked through the field on our way back inside when something caught my attention. On the edge of the field there were 3-4 birch trees all in an unevenly spaced line at the edge of the woods. I couldn't tell the exact number of trees because I only got to look at them for a few seconds and the many trunks coming from one tree threw me off in my counting. That got me thinking, what conditions make it so the edge of the field has more birch trees than the woods?

Later after doing some research I learned that birch trees like lots of sunlight, that could be one reason why birch trees were growing better on the edge of the field. Since the birch tree in the forest would be under a thick canopy once spring came that could be why the birch tree in the woods wasn't getting enough sunlight to fully thrive. The next thing I looked at was if there was a big difference in the soils in both areas. I know that birch trees have shallow roots that can easily be disturbed by, for example if a road was being built by the tree, but since the tree in the woods was a good distance away from the trail I don't think that was the cause of any problems. While doing research I also learned that birch trees "thrive on cool, moist soils," according to an article by the USDA titled "How to Grow and Maintain a Healthy Birch Tree." It also mentions how it's hard to find a place where the tree leaves get enough sunlight but not too hot of a place that could evaporate and dry out the water in the soil. Though the birch tree in the forest had nice damp soil it didn't get enough sunlight to be in that goldilocks zone, while the trees on the edge of the field had the branches sticking out enough to take in the sunlight while the base of the tree was still shaded in the woods.

Based on what I learned from doing research I can conclude that the most likely reason that the birch trees on the edge of the field were growing better and more plentiful than the one in the woods is because the ones on the edge of the field had better access to sunlight. If I go back to that area in the spring and summer one thing I will look for would be to see if the

tree in the woods has any fungal or pest infestations. I wonder if this makes any difference in how the tree in the woods was growing, but since a lot of trees that are pest infested, you can only tell they are infested because of the leaves, since I was observing the trees in late fall all the leaves had already fallen off the trees. In late summer if the leaves at the top of the tree are yellowing that is a sign of the bronze birch borer which bores into the trunks of trees and could kill them, that would explain why the birch tree in the woods has a few dead trunks. To summarize, I think that the reason why the one in the woods wasn't growing as well was because it didn't get enough sunlight, I could further investigate the trees by looking to see if there was any pest or fungal infestations.

Below: A picture of the field at my school from google maps (ignoring all the trailers and the tent on it those aren't usually there.) The red circle is where the trail is and the blue line is the forest edge where some of the birch trees were.



Works cited:

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