WIU CENTENNIAL HONORS COLLEGE
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Abstract

Poster

Major Biology

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Tree Species Diversity Along a Streambed in West Central Illinois

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Biodiversity is the variety of organisms within an environment. This variety is incredibly important; it allows ecological niches to be filled and helps to maintain the overall health and balance in an ecosystem. The diversity of tree species is an important factor in an ecosystem's health and biodiversity. Trees provide habitats, resources, and structure to their surrounding environment. In my research, I hoped to find the level of tree species diversity along a streambed in a plot of land dedicated towards restoration. When restoring land, the goal is often to reintroduce native species which have adapted to the particular environment. For this reason, we expected to find native tree species that have adapted to wet environments and sometimes the complete submersion of their roots. Data collection took place on September 20, 2021. The stream bed studied, which was dry at the time of observation, spans 175 meters, and connects a pond to a wetland. To evaluate the tree species diversity, we walked the length of the streambed and recorded every tree located within a foot of the streambed on either side. We identified a total of 38 trees along the transect. The species included Ulmus americana, Quercus velutina, Populus deltoides, Quercus alba, Quercus stellata, Carya ovata, and young trees from the Cornus genus. All species identified are native to Central Illinois. The species from the Cornus genus made up approximately 76% of the tree growth along this streambed. Using the Simpson's Index of Diversity, an index of 0.414 was calculated.