

Western Illinois University  
2021 Thomas E. Helm Undergraduate Research Conference

**Abstract**

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Recorded Scholarly Presentation

Major: Biology

Faculty Mentor: Victoria Livingston

**Tree Species Diversity of a Riparian Zone on a Converted Wetland Body**

**Elyse Mathews**

Riparian zone biodiversity is incredibly important for the overall health and balance of an aquatic system and the surrounding environment. Riparian zones are home to numerous species of plants and animals, including plant species that prevent erosion, stabilize stream banks, benefit aquatic and land organisms, and more. Research on tree species diversity, specifically species richness and evenness, can help determine the effectiveness of conservation practices and evaluate the overall health of the environment. In addition, research on this land may be important in the prevention of invasive species that can harm an environment and the other organisms living within. The research will be conducted in a riparian zone of a piece of land that has been converted from agricultural land to prairie and forest land. To conduct this research, a quadrat sampling method will be implemented along the riparian zone to approximate the tree species diversity in the sample area. The diameter at breast height (DBH) of every tree over 4 centimeters, within each plot of land, will be recorded. Along with DBH, each tree's coordinate location and species will also be recorded. A tree survey will be produced using the trees recorded. This survey will be used to evaluate the effectiveness of the conservation methods implemented and to determine the natural species diversity of this area.