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Relationship Between Habitat Successional Stage and Small Mammal Diversity

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Abstract

During the summers of 2009-2012 a trapping study was conducted in and around Julian Price Park in Watauga County, N. C. These studies were intended to show a correlation, positive or negative, between the successional stages of a forest and the small mammal diversity found within. It was hypothesized that a higher diversity of mammals would be found in lowland communities than in upland communities in the same successional stage. The successional stages were divided up into Early Successional Meadow, Early Successional Thicket, Mid-successional Mixed Forest, and Mature Hardwood Forest. Each successional stage was then divided up into lowland (wet) and upland (dry) groups, making a total of eight different habitats. A total of 13 sample communities were tested, however, only nine yielded mammals. The experiment required the use of Sherman traps, medium Havihart, and large Havihart traps. The exact number of traps along with the number of sites varied year to year. The traps used the same bait each year and were checked each morning during a four-day time span. A Shannon Diversity Index was used to learn more about the composition of each community. Based on the data gathered there was no trend, positive or negative, linking the successional stage of the forest to the small mammal diversity found there. However, it was observed that the lowland successional stages (the ones with water) had greater small mammal diversity than the correlating upland successional stages.