

Diversity of Habitats within Itasca State Park

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Small mammals are found throughout Minnesota in various habitats. The six different habitat sites used for data collection within Itasca State Park includes: burned deciduous, unburned deciduous, burned red pine, unburned red pine, aspen, and bog.

At each habitat site 40 Sherman traps and eight Longworth traps were used. They were set up as a 4 x 10 grid with each column having ten Sherman traps and two randomly placed Longworth traps. The Longworth traps were set close to a Sherman trap at a particular point. Traps were checked for three mornings in a row.

The types of species that were captured includes: *Peromyscus spp.* (Deer mouse/White-footed mouse), *Myodes gapperi* (Red-backed vole), *Tamias striatus* (Eastern chipmunk), *Microtus pennsylvanicus* (Meadow vole), *Glaucomys volans* (Southern flying squirrel), *Blarina brevicauda* (Northern short-tailed shrew), and *Tamiasciurus hudsonicus* (Red squirrel). Each time species were captured, identified, marked, measured, weighed, and released after data collection. The measurements taken were the ear, hind-foot, tail. The marking system used to identify re-captured animals was cutting of toes. This was only done with the smallest mammals that do not rely on their toes as much for digging. The *Peromyscus* that were captured had a saliva sample taken for DNA to further identify the species of mice. They are extremely difficult to accurately identify by only observing their physical characteristics (Marsh 1990).

A total of 122 small mammals were caught during the three consecutive days. Unburned red pine had the highest number of small mammals caught (34) while the fewest caught were from the bog (8). The only species that was caught at all locations was *Peromyscus*. The unburned red pine, aspen, and bog all had four different types of species present (Figure 1).

An overall habitat comparison shows that the unburned red pine had the highest number of total mammals caught, with one of the most diverse number of mammal species present. The least productive habitat was the bog. Even though the bog had four different types of species, there were only eight small mammals caught. Though the *Peromyscus* was found in all habitats, the saliva data results may show that different species are occurring only in certain habitats.

One reason could be why the unburned red pine was more productive than the others, in regards to diversity, is that the small mammals had more places to hide and nest than past burned areas. Unburned habitats have a greater amount of understory which may offer small mammals a better chance of protection from predators.

Literature Cited

Marsh, R. E., and W. E. Howard. 1990. Vertebrate pests. Pages 771-831 in A. Mallis, ed. Handbook of pest control, 7th ed. Franzak and Foster Co., Cleveland, Ohio.

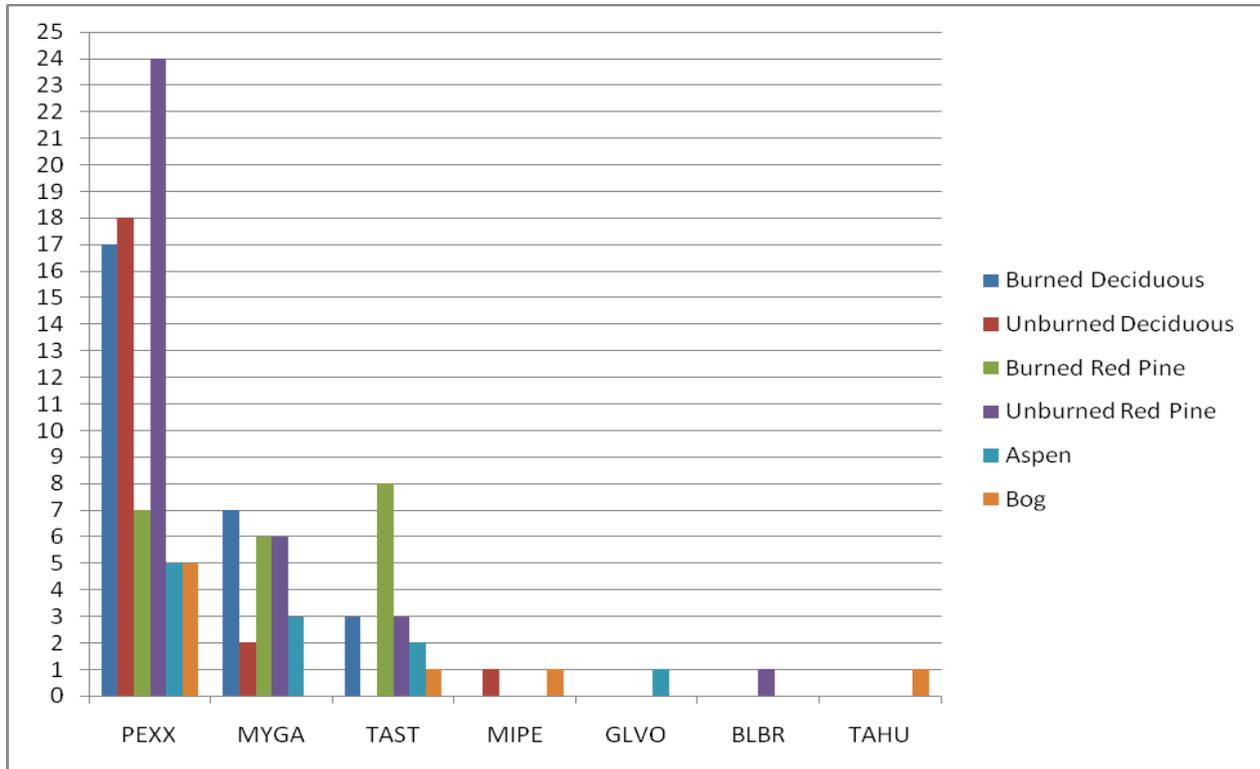


Figure 1. The specific mammal species and which habitat they are found in. PEXX= *Peromyscus spp* MYGA= *Myodes gapperi* TAST= *Tamias striatus* MIPE= *Microtus pennsylvanicus* GLVO= *Glaucomys volans* BLBR= *Blarina brevicauda* TAHU= *Tamiasciurus hudsonicus*.