

Influence of forest restoration treatments on Mogollon voles

Mogollon voles (*Microtus mogollonensis*) are grassland specialists that prefer open stands and respond positively to forest treatments that create open spaces. Yet little is known regarding the forest structure that voles prefer post-treatment. For instance, in treated areas, do they prefer grassy understory habitats dominated by C3 or C4 grasses? And are they found in relatively brushy or bare understories? What level of forest alteration or treatment can they tolerate?



Because Mogollon voles are dependent on grassy habitats, and vole habitat may be highly impacted by forest treatment activities, Mogollon voles are thus a useful species in monitoring the effects of management practices on the wildlife dependent on grasslands and open spaces. Results from this research effort will inform both land and wildlife managers of the effects of forest restoration treatments on habitat attributes associated with Mogollon voles.

Objectives

- 1) Determine the habitat attributes associated with presence of Mogollon voles.
- 2) Examine the relationship between these attributes and treatment type.

This project is being conducted in Region 2 at the Fort Valley Experimental Forest near Flagstaff. This project started in 2011 and is scheduled to take 3 years, with completion in 2014.

Preliminary Results

To date, our observations in Fort Valley Experimental Forest have shown that Mogollon vole runways are more abundant in areas with naturally low tree basal area and high understory cover and in full restoration plots, which are more open than other types of forest treatment. Full restoration plots have the lowest tree density, greatest amount of herbaceous understory, and the most old growth trees of all treatments in the Fort Valley area. This suggests that Mogollon voles do indeed respond positively to forest treatments that open up overstory canopies and create open spaces below. This project will be finalized in the summer of 2014, with a final report to follow.

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