



Changes in soil temperature during prescribed burns impact local arthropod communities

Robin Verble-Pearson and Gad Perry

Department of Natural Resources Management, Texas Tech University, Lubbock, United States (robin.verble@ttu.edu)

As wildfires increase in severity and intensity globally, the development of methods to assess their effects on soils is of increasing importance. We examined soil arthropod communities in the southern United States and estimated their abundance, species richness, and composition in areas recently impacted by prescribed burns. In addition, we placed thermal probes in soils and correlated soil temperatures to arthropod responses. Longer fire residence times resulted in greater soil heating which resulted in decreases in arthropod abundance and species richness and shifts in species composition. We believe that these results may be useful in developing tools to assess fire effects on soil systems.