

NATIVE AND EXOTIC SEED DISPERSAL BY BISON IN A RECONSTRUCTED PRAIRIE

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This pilot study focused on epizoochory by bison at the Neal Smith National Wildlife Refuge, an ongoing prairie reconstruction project. We examined the percentage of native to non-native/invasive seeds transported by the bison within the 300-ha bison and elk enclosure on the refuge, which contained an approximately equal number of native and non-native plant species in patches ranging from 5-90% cover of native species. Seeds were extracted from samples of shed bison hair collected opportunistically throughout the enclosure in summer 2007, the location of hair samples was recorded by GPS. While there was a higher mean number of seeds from non-native/invasive seeds per gram of bison hair, there were more native *species* present in bison hair, suggesting that bison may distribute a wider diversity of native plants (13 species) than non-native/invasive plants (9 species) in the hair. The greater species richness of native seed in bison hair may be due to habitat selection by bison, differences in adaptation of seeds for epizoochory, or differences in seed production among plant species. We also compared the species in the samples to the species in the patch where they were deposited. We found no relationship between diversity and the size of the sample or the size of the plant community in which it was deposited. Further studies of seed dispersal in this system will contribute to our understanding of the interaction of bison with ongoing restoration activities.