Differences in Bird Diversity on Bison vs. Cattle Grazed Ranches in Northeastern New Mexico

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Large ungulate grazing has played a significant role in shaping grassland habitats of the Great Plains in North America. American Bison (*Bison bison*) once roamed the plains in herds estimated to be around 30 million, playing a major role in maintaining abundance and diversity of plain's biota. Today most of these areas are primarily grazed by cattle. Changes in grass height, ground cover, and shrub abundance can have profound impacts on grassland wildlife species, especially birds. Grassland birds are some of the most threatened birds in North America due to habitat loss and overgrazing. Although bison and cattle are functionally similar as large grass-feeding herbivores, differences exist in grazing behavior that suggests bison may be a key species for maintaining diversity in grasslands. This study compared bird diversity on two neighboring ranches, one bison grazed, and the other cattle-grazed. Bird

diversity was measured in riparian and grassland habitat using point-count surveys during 2011. We found statistical evidence that bird diversity was higher in grassland habitat on the bison grazed ranch. We also found that bird diversity was higher in grazed vs. nongrazed grassland on the cattle grazed ranch. These results suggest that low-intensity to moderate grazing by both cattle and bison supports grassland biodiversity, and further suggests that native grazers (bison) can help restore grassland plant communities and structures, reestablishing important habitat for birds and other wildlife.