



SAND CREEK MASSACRE

Birds

RESOURCE BRIEF

Importance

Bird communities reflect a broad range of ecosystem conditions including water quality and vegetation structure, composition, and productivity. Birds are increasingly recognized as important indicators of long-term trends in ecosystem health and the success of management practices. Birds are subject to pressures such as historic and current land use, visitation, development, air and water pollution, and other changes in the surrounding landscape. Long-term population monitoring data can be used to examine the broad effects of human activities and measure the sustainability of those activities. In 2001, 46 million bird watchers in the US spent over \$32 billion in birding and other related activities. Healthy bird communities may contribute to the local economy and visitor experiences to Sand Creek Massacre National Historic Site (NHS).

Status and Trends

In 2005, 59 species were documented in the Sand Creek Massacre NHS during a baseline inventory, including two listed as species of special concern by Colorado: the burrowing owl (*Athene cunicularia*) and mountain plover (*Charadrius montanus*). Of the species documented, 16 are also listed as species of conservation concern or stewardship species in the shortgrass prairie system conservation region by the Partners in Flight North American Landbird Conservation Plan.



VICTORIA DREITZ

Mountain plover (*Charadrius montanus*)

The site is used by species that require high grass structure, such as the short-eared owl (*Asio flammeus*) and dickcissel (*Spiza americana*), as well as species that prefer low grass structure and prairie dog burrows, such as the burrowing owl and mountain plover. Though not documented, Sand Creek Massacre NHS could potentially support other species including the ferruginous hawk (*B. regalis*), lesser prairie chicken (*Tympanuchus pallidicinctus*), and prairie falcon (*Falco mexicanus*). Birds detected in the site represent a diversity of habitat use, suggesting that the shortgrass prairie habitat mosaic in the site is healthy.

Discussion

The 2005 inventory established baseline information and pilot monitoring activities using standardized techniques which can be compared with and contribute to state and regional inventory and monitoring efforts. The diverse habitat and various conditions within Sand Creek Massacre NHS support species with a wide range of habitat needs in various seasons. Stopover locations, such as the site's riparian habitat, are limited in the shortgrass prairie and are vital to migratory birds. Several species were documented using the riparian habitats, though they do not breed in the area. The combination of shortgrass prairie and riparian habitats in the site are uncommon in shortgrass prairie ecosystems and are important to numerous bird species, including species of concern. Birds documented during the survey suggest the need to manage for taller grass species and prairie dog communities which support sensitive species.



STEVE MASLOWSKI

Dickcissel (*Spiza americana*)