

Dickcissel (*Spiza americana*)

NMPIF level: Biodiversity Conservation Concern, Level 2 (BC2)

NMPIF assessment score: 14

NM stewardship responsibility: Low

National PIF status: Watch List

New Mexico BCRs: 18

Primary breeding habitat(s): Plains-Mesa Grassland, Agricultural

Summary of Concern

Dickcissel is an abundant grassland species that breeds in the plains of the central United States and winters in high concentrations in Venezuela. Populations declined dramatically prior to 1980, but now appear more stable. The species has been killed in large numbers on its wintering grounds, where it is an agricultural pest, and is also challenged by changing land uses and nest parasitism. It reaches the western limit of its distribution in eastern New Mexico.

Associated Species

Ring-necked Pheasant, Northern Bobwhite, Eastern Kingbird, Grasshopper Sparrow (BC2), Western Meadowlark

Distribution

Dickcissel is a grassland species of the central United States, with a core breeding range in the prairie grassland region of the central and south-central United States. A broader, peripheral breeding range extends in all directions around the core. The species reaches the western limit of its breeding distribution in grasslands of eastern New Mexico and Colorado.

In New Mexico, Dickcissels breed locally (probably not annually) in the eastern plains, from Fort Sumner and Clovis/Portales area north to Maxwell NWR and the Clayton area. Dickcissels are long-distance migrants, wintering in a core area in central Venezuela and in other locations in the northern part of South America, also in Central America and southern Mexico (Temple 2002).

Ecology and Habitat Requirements

Dickcissel is an abundant and characteristic species of North American prairie grasslands, though populations also move irregularly into other kinds of grassland habitat outside of the core breeding range. Although most native prairie has been converted to agriculture, Dickcissels have adapted to a number of secondary habitats and agricultural landscapes. The species nests in a variety of open grassland habitats with dense (90-100%) cover, moderate to tall (25-150 cm) vegetation, moderately deep (5-15 cm) litter, and song perches that rise about the surrounding vegetation (Dechant et al. 1999, Temple 2002). Suitable breeding habitat may be found in native prairies, restored grasslands, hayfields, lightly grazed pastures, early successional fields, and linear grassland strips as along fences and roadsides. In all of these areas, high forb cover (>50%) is important for song perches, nesting cover and support, and an abundance of invertebrate prey. Patches >10 ha are preferred. Recent heavy grazing, burning or mowing can temporarily reduce suitability of habitat until vegetation recovers (Temple 2002). Reproduction may suffer with heavy grazing in shortgrass areas, but appears stable with moderate grazing in tallgrass (Yanishevsky and Petring-Rupp 1998).

New Mexico is not a core breeding area, but serves as a secondary breeding location particularly during periods of drought in the Midwest. In the state, Dickcissels prefer nesting in areas of dense forb cover in alfalfa and sweet clover fields, but also use cropland, grassland (especially tallgrass), Conservation Reserve Program (CRP) fields and unused, weedy fields in early successional stages. Populations reach higher densities in areas of greater vegetation, and rates of cowbird parasitism decrease in denser population areas. Nests are usually placed in forbs, less than 3 feet above the ground (Yanishevsky and Petring-Rupp 1998, Temple 2002). Dickcissels are generally present on the eastern plains from May through early October.

Conservation Status

Species Assessment

DISTRIBUTION	4
THREATS	4
GLOBAL POPULATION SIZE	2
LOCAL POPULATION TREND	3
IMPORTANCE OF NEW MEXICO TO BREEDING	1
COMBINED SCORE	14

Dickcissel is a Biodiversity Conservation Concern, Level 2 species for New Mexico, with a total assessment score of 14. Dickcissel is a national PIF Watch List species. At the continental level, it receives high PIF vulnerability scores of 4 for its relatively small non-breeding distribution and for threats in non-breeding areas. Dickcissel is a U.S. Fish and Wildlife Service (2002) national Bird of Conservation Concern.

Population Size

PIF estimates a species population of 22 million. Basili and Temple (1999) estimated a population of at least 6 million based on counts where Dickcissels are extremely concentrated at winter roosts in Venezuela. The size of the New Mexico population is unknown, but is only a very small fraction of the species total. Breeding densities may exceed 50 nests/40 ha in good habitat within the core range, but are far lower in peripheral areas (Temple 2002).

Population Trend

Although the population is still large, Dickcissel has shown significant declines in many areas. BBS data show a range-wide decline of over 30% from 1966-1980, after which the population stabilized. Statistically significant declines are shown for only a few regions by post-1980 BBS data. The New Mexico breeding population is irregular, and no significant trends are noted. PIF assigns a score of 4 for population trend, which helps raise this species to Watch List status. BBS data for 1966-2004 are:

	Annual Trend (%)	P-value	Number of Routes
New Mexico	3.0	0.71	3
FWS Region 2	3.1	0.20	203
Survey-wide	-0.9	0.05	931

Threats

Principal threats to this species are on its wintering grounds, where Dickcissels are hunted and eaten, and where night-roosting birds have been deliberately poisoned in mass numbers by farmers using agricultural chemicals. Although measures to decrease this mortality are in effect, illegal killing probably continues. On their breeding grounds, Dickcissels have been both harmed and benefited by changing land uses. Very high rates of nest parasitism by Brown-headed Cowbirds have been reported from a number of locations (Temple 2002). In New Mexico, breeding birds in alfalfa fields may be threatened by hay cutting.

Management Issues and Recommendations

Management for Dickcissel in New Mexico should focus on maintaining prairie habitat and weedy fields, and protecting breeding birds from disturbance prior to fledging.

NMPIF Recommendations

- Maintain early successional, weedy fields and mid-grass prairie, with perches rising above average height of vegetation.
- Manage grazing in shortgrass areas to maintain sufficient grass and forb growth where Dickcissels are present.
- Delay haying until after breeding season (beginning of August) where Dickcissels are present.

Species Conservation Objectives

PIF Objectives

The PIF North American Landbird Conservation Plan places Dickcissel in the conservation action category Management. It sets a population objective of increasing the current population size by 50% over the next 30 years.

NMPIF Objectives

- Maintain current known nesting populations near Fort Sumner, Clovis, and Maxwell NWR.

Sources of Information

Basili, G. D., and S. A. Temple. 1999. Winter ecology, behavior, and conservation needs of Dickcissels in Venezuela. *Stud. Avian Biol.* 19:289-299.

Dechant, J., M. Sondreal, D. Johnson, D. Igl, C. Goldade, A. Zimmerman, and B. Eulis. 1999. Effects of management practices on grassland birds: Dickcissel. Northern Prairie Wildl. Res. Center, Jamestown, ND.

Temple, S. A. 2002. Dickcissel (*Spiza americana*). In *The Birds of North America*, No. 703 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

U.S. Fish and Wildlife Service. 2002. Birds of conservation concern 2002. Division of Migratory Bird Management, Arlington, VA. 99 p.

Yanishevsky, R., and S. Petring-Rupp. 1998. Management of Breeding Habitat for Selected Bird Species in Colorado. Colorado Division of Wildlife. Denver, CO.