

## **Sprague's Pipit (*Anthus spragueii*)**

Winter Only

NMPIF level: Biodiversity Conservation Concern, Level 1 (BC1)

NMPIF assessment score: 17

NM stewardship responsibility: Low

National PIF status: Watch List

New Mexico BCRs: 34, 35 (both in winter only)

Primary wintering habitat(s): Chihuahuan Desert Grasslands

### **Summary of Concern**

Sprague's Pipit is an endemic grassland species of the northern Great Plains, with a fairly broad winter range in the southern United States and northern Mexico. Like other grassland specialists, populations have been declining due to habitat change and loss in breeding and wintering areas. A small wintering population occurs in grasslands of southern New Mexico.

### **Associated Wintering Species**

Savannah Sparrow, Grasshopper Sparrow (BC2), Baird's Sparrow (BC1), Chestnut-collared Longspur

### **Distribution**

An endemic grassland species of the northern Great Plains, Sprague's Pipit breeds in southern portions of Alberta, Saskatchewan and Manitoba, eastern Montana, and North Dakota. It winters from southeast Arizona east across most of Texas to Louisiana and Mississippi, and south in Mexico to Michoacán, Puebla, and Veracruz.

In New Mexico, Sprague's Pipit occurs sporadically in winter in southern desert grasslands, primarily in the lower Pecos River Valley, Otero Mesa and the Animas Valley (Robbins and Dale 1999, Parmeter et al. 2002). Appropriate grassland habitat in other areas has not been well-surveyed.

## Ecology and Habitat Requirements

Little is known about this species, particularly outside of the breeding season, though roughly similar habitats appear to be favored year-round (Robbins and Dale 1999). Sprague's Pipit prefers dry, open grasslands. Native grass species are preferred over prairie exotics such as smooth brome or crested wheat grass. The species is most common in areas of intermediate grass height and thickness, and moderate litter depth. Areas with shrubs, even at low densities, are avoided for breeding (Robbins and Dale 1999). Non-breeding habitat in the southwest may include taller grass than in areas typically used for breeding and some shrub cover. Wintering areas may have grasses >1 ft (0.3 m) and greater than 60% grass canopy cover. Minimum area requirements in winter are not known, but the species is generally not present on patches smaller than 2.5 ac in size. Sprague's Pipits are present in southern New Mexico from October to early April.

## Conservation Status

### Species Assessment

DISTRIBUTION	4
THREATS	4
GLOBAL POPULATION SIZE	3
LOCAL POPULATION TREND	5
IMPORTANCE OF NEW MEXICO TO BREEDING (WINTERING)	1
<b>COMBINED SCORE</b>	<b>17</b>

Sprague's Pipit is a Biodiversity Conservation Concern, Level 1 wintering species for New Mexico, with a total assessment score of 17. NMPIF assigns a score of 4 for threats to wintering in New Mexico. Sprague's Pipit is a national PIF Watch List species. At the continental level, it receives a maximum PIF vulnerability score of 5 for negative long-term population trend, and a score of 4 for its restricted breeding distribution. Sprague's Pipit is a U.S. Fish and Wildlife Service (2002) national Bird of Conservation Concern.

## Population Size

PIF estimates a species population of 870,000. Size of the wintering population in New Mexico is unknown, but seems to be very small. Parmeter et al. (2002) note roughly 44 reports of the species, however grasslands are not well-surveyed during late fall to early spring.

## **Population Trend**

Limited data available for winter populations in New Mexico. BBS data for 1966-2004 show significant long-term declines survey-wide (annual trend = -4.4,  $p = 0.00$ ,  $n = 150$ ).

## **Threats**

Populations of this species were greatly reduced in the late 19th and early 20th centuries due to extensive clearing of prairie habitat for agriculture. Continuing declines are thought to be the result of ongoing habitat loss and degradation on both breeding and wintering grounds (Samson and Knopf 1994). The spread of exotic grass species has reduced breeding densities in many areas. Several studies have found an inverse relationship between breeding density and intensity of grazing, particularly in drier and less densely vegetated areas (Robbins and Dale 1999). Encroachment of shrubs and trees in wintering areas, due in part to a history of overgrazing over the past century, has reduced suitable grassland habitat in the southwest and northern Mexico (Brown 1982, Stotz et al. 1996). Such impacts are often exacerbated by drought. Following a 5-year period of drought in Chihuahua, large areas of grassland were reduced to bare ground, and only a single pipit was recorded in Jan 1996 (W. Howe pers. comm.). A total of 54 pipits were recorded at the same site a year later, after grasslands had been rejuvenated by rains (Enkerlin 1997).

## **Management Issues and Recommendations**

Management for Sprague's Pipit in New Mexico should focus on maintaining or creating large areas of Chihuahuan Desert Grassland habitat, dominated by native species with little or no shrub encroachment.

## **NMPIF Recommendations**

- Where possible, seek to manage grazing to maintain high densities of medium and tall grasses with minimal shrub cover.
- Investigate effects of fire and grazing on habitat use, and design management accordingly. Burning reduces shrub encroachment as well as residual grass cover, and may either reduce or enhance invasion of exotic plants. Appropriate grazing may reduce residual grass cover and may stimulate growth of native plants and prevent or slow invasion by exotic plants (Robbins and Dale 1999).

## Species Conservation Objectives

### NMPIF Objectives

- Monitor for presence at suitable locations throughout the Chihuahuan Desert from December to February.
- Maintain or expand existing wintering populations.

### Sources of Information

Brown, D. E. 1982. Grasslands. *In* Biotic communities of the American Southwest—United States and Mexico (D. Brown, ed.). Desert Plants 4:107–141.

Enkerlin, E. 1997. Ninety-seventh Christmas bird count. Mexico, Belize. Field Notes 51:651.

Parmeter, J., B. Neville, and D. Emkalns. 2002. New Mexico Bird Finding Guide. New Mexico Ornithological Society, Albuquerque, NM.

Robbins, M. B., and B. C. Dale. 1999. Sprague's Pipit (*Anthus spragueii*). *In* The Birds of North America, No. 439 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Samson, F., and F. Knopf. 1994. Prairie conservation in North America. BioScience 44:418–421.

Stotz, D. F., J. W. Fitzpatrick, T. A. Parker, and D. K. Moskovits. 1996. Neotropical birds. Ecology and conservation. Univ. of Chicago Press, Chicago, IL.

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