

**FIRST RECORD OF CASSIN'S SPARROW IN PONTOTOC COUNTY, OKLAHOMA**

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*Abstract*—The Cassin's Sparrow (*Peucaea cassinii*) is a summer resident in western Oklahoma that occasionally strays east during times of drought. In May and June of 2011, I observed  $\geq 7$  Cassin's Sparrows in Pontotoc County in east-central Oklahoma. There are no previous records of Cassin's Sparrows in Pontotoc County, and the number of individuals seen fits the definition of 'Probable Nesting' under the protocol of the Oklahoma Breeding Bird Atlas. These observations coincided with a severe drought and with unconfirmed reports of Cassin's Sparrows as far east as Ohio and North Carolina.

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The Cassin's Sparrow (*Peucaea cassinii*) is a migrant and summer resident of western Oklahoma whose populations tend to undergo large fluctuations in both range and numbers due to changes in rainfall (Carter and Duggan 2004). Cassin's Sparrow normally inhabits open prairie with scattered shrubs such as sage, shinnery oak, and mesquite (Sutton 1967, Dunning et al. 1999). In Oklahoma, it has been recorded east to Noble, Cleveland, and Johnston Counties (Grula 1973, Carter and Duggan 2004), but there are no extant records for Pontotoc County.

**LOCATION AND HABITAT**

In spring 2011, I observed Cassin's Sparrows several times in southern Pontotoc County at The Nature Conservancy's Pontotoc Ridge Preserve, Oklahoma. The preserve is a 1174-ha private property preserve located on the Arbuckle plateau in south-central Oklahoma. The preserve straddles the boundary between Pontotoc County on the north and Johnston County on the south. Habitat at the preserve consists of a mosaic of tall-grass prairie and oak forest typical of the Cross Timbers region. Vegetation in the eastern part of the preserve, where the soil is extremely shallow and rocky, is sparse grassland with many shrubs, small patches of trees, and extensive areas of bare ground. The dominant grass is little bluestem (*Schizachyrium scoparium*), the main shrubs are sand plum (*Prunus angustifolia*) and fragrant sumac

(*Rhus aromatica*) and the main tree species are Osage orange (*Maclura pomifera*) and winged elm (*Ulmus alata*). This area provides habitat for shrubland birds such as Bell's Vireo (*Vireo bellii*), Yellow-breasted Chat (*Icteria virens*), Rufous-crowned Sparrow (*Aimophila ruficeps*), and Northern Bobwhite (*Colinus virginianus*).

### **OBSERVATIONS**

On 17 May 2011, I audibly detected three Cassin's Sparrows while conducting point counts on the eastern part of the preserve between 0624 and 0636 hrs. At 1215 hrs on the same day I returned to the area with Jona Tucker, preserve manager, and we observed one Cassin's Sparrow skylarking and singing, while another individual was heard but not seen. On 2 June 2011, Dwayne Elmore accompanied me to the preserve in the early afternoon and we observed two Cassin's Sparrows skylarking and singing. On 3 June 2011, I heard seven individual Cassin's Sparrows while conducting point counts in the same area between 0848 hrs and 0921 hrs. I again audibly detected two Cassin's Sparrows while conducting point counts on 19 June 2011, between 0631 hrs and 0646 hrs. Due to time constraints I was unable to verify whether nesting occurred, but the detection of seven singing males met the criterion for 'Probable Nesting' under the protocol established for the Oklahoma Breeding Bird Atlas (Reinking 2008). Additional reports of Cassin's Sparrows east of the normal breeding range in Oklahoma occurred in Johnston, Payne and Osage Counties during 2011.

### **DISCUSSION**

In summer 2011, there were unconfirmed reports of Cassin's Sparrows in Illinois, Indiana, Ohio, Louisiana, and North Carolina (<http://ebird.org/content/ebird/>, accessed 31 Oct 2011). There were also confirmed and unconfirmed reports of Cassin's Sparrows in eastern Kansas in summer 2011, including Sedgewick, Chautauqua, and Marion counties (<http://ebird.org/content/ebird/>, accessed 13 Feb 2012), as well as Sumner, Kingman, and Harper counties (Eugene A. Young pers. comm.), all of which would be county records according to Busby and Zimmerman (2001) and Thompson et al. (2011).

It is well known that Cassin's Sparrow range and populations fluctuate wildly in response to rainfall (Dunning et al. 1999), and it has been suggested that they will occur farther east in or after drought years when vegetation is unusually sparse (Carter and Duggan 2004). Between 1 January and 1 November 2011, rainfall in Oklahoma was 59% of normal, and qualified as the second driest year on record since 1921 (<http://climate.ok.gov/index.php/drought/>, accessed 2 Nov 2011). The Palmer Drought Severity Index for 31 May 2011 showed moderate to extreme drought coinciding with the breeding and wintering range

of Cassin's Sparrow in the United States (<http://www.droughtmonitor.unl.edu/archive.html>, accessed 17 May 2012). Additionally, most of the Pontotoc Ridge Preserve was subjected to both prescribed burns and wildfires in spring 2011, including the part of the preserve where Cassin's Sparrows were detected. These factors did not diminish the amount of grass cover, which was already sparse (average 32%), but reduced the amount of standing dead vegetation (including residual grass cover) and shrub cover and increased the amount of bare ground in the area of the sightings (Table 1). It is likely that these habitat factors made the area attractive to Cassin's Sparrows in a year when they were irrupting eastward due to drought. Several other hypotheses have been suggested for the large fluctuations in range by Cassin's Sparrows, including east-west migration patterns unique among North American sparrows, failed breeders attempting to breed elsewhere, and regional nomadism in search of good breeding conditions, but there is little support for any of these hypotheses (Dunning 1999). Therefore, regional drought remains the most likely explanation for the occurrence of Cassin's Sparrows outside of their normal breeding range in 2011.

#### ACKNOWLEDGMENTS

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Table 1. Percent cover of grass, standing dead vegetation, litter, and bare ground before (June 2010) and after (June 2011) fires on the Pontotoc Ridge Preserve in Pontotoc County, Oklahoma, in the area where Cassin's Sparrows were found in June 2011.

Year	Grass	Standing Dead	Litter	Bare Ground
2010	31.64	11.61	54.10	42.16
2011	32.23	3.20	29.69	65.55

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**ERRATUM.** In our article *Morphometrics of nesting Prothonotary Warblers at Tishomingo National Wildlife Refuge, Oklahoma* (Wood, D. R., M. L. Elmer, and C. L. Newman. 2012. *Bulletin of the Oklahoma Ornithological Society*, 45 [1]: 1-5) the third sentence of the Abstract should be changed to: Adult warblers ( $\geq 2$  years old) tended to have longer wing and tail lengths than second year warblers ( $< 2$  years old).

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