

WINTER PRAIRIE BIRD SURVEY



Photo by Ken Butler

2018-2019

CIBOLO PRESERVE, BOERNE TEXAS

Winter Prairie Bird Survey

CIBOLO PRESERVE

HISTORY

The Winter Prairie Bird Survey (WPBS) has been conducted on The Cibolo Preserve (aka Herff Falls Ranch) since the winter of 2003. The survey utilizes a volunteer workforce of Citizen Scientists who are familiar with grassland species of birds. Prior to each survey, the volunteers are instructed in the protocol for data collection and are re-familiarized with the flight patterns of the expected species to facilitate identification.

Because grassland species are quite difficult to distinguish based on feather patterns and coloration, using flight patterns is an acceptable method to utilize in determining species. The WPBS has identified at least 10 different species using the grasslands on the Cibolo Preserve over the last 15 years. There are three bird species that are of particular interest to the Texas Parks & Wildlife Department. The Le Conte's sparrow, grasshopper sparrow and the meadowlark are all listed in the [Texas Parks & Wildlife Department Conservation Action Plan](#) (2012) as Species of Greatest Conservation Need (SGCN). These species have declined or have a very restricted range and should be considered a management priority for the area. All three of these species have been previously recorded during the WPBS at the Cibolo Preserve.

FINDINGS

Within the confines of the Winter Prairie Bird Survey protocol transects for the 2018-2019 season, there were 19 birds recorded during the December, January and February surveys. Transects 4, 5 and 6 were not completed in December due to high winds, however, the observations in January and February included all three SGCN. Observations included one vesper sparrow, nine savannah sparrows, five grasshopper sparrows, three LeConte's sparrow and one Meadowlark with additional species observed outside the survey protocol (see comment fields on the raw data sheets).

The total count of birds within the transects was 19, an average of 5.34 per hectare, which is higher than last years average of 3.3 per hectare. Although counts and precipitation historically trended similarly from 2009 – 2012, the years after have shown variability that cannot be solely attributed to annual cumulative rainfall. Seasonal precipitation variability is a factor we will need to consider, as well as land management practices occurring in the transects, such as mowing, burning or no action. As more refined land management practices are implemented on the Cibolo Preserve, we hope to be able to take a closer look at those practices and their influence on the winter prairie bird counts.

Total bird densities and precipitation for the past ten seasons are presented below.

Year	Density / hectare (all birds)	Annual precipitation (end of start year)
2018-2019	5.34	43.39
2017-2018	3.26	26.01
2016-2017	10.06*	40.51
2015-2016	5.59	53.94
2014-2015	11.89	26.26
2013-2014	24.01	33.64
2012-2013	43.82	31.08
2011-2012	0.70	14.67
2010-2011	31.47	40.02
2009-2010	10.26	28.79

*correction from earlier reports

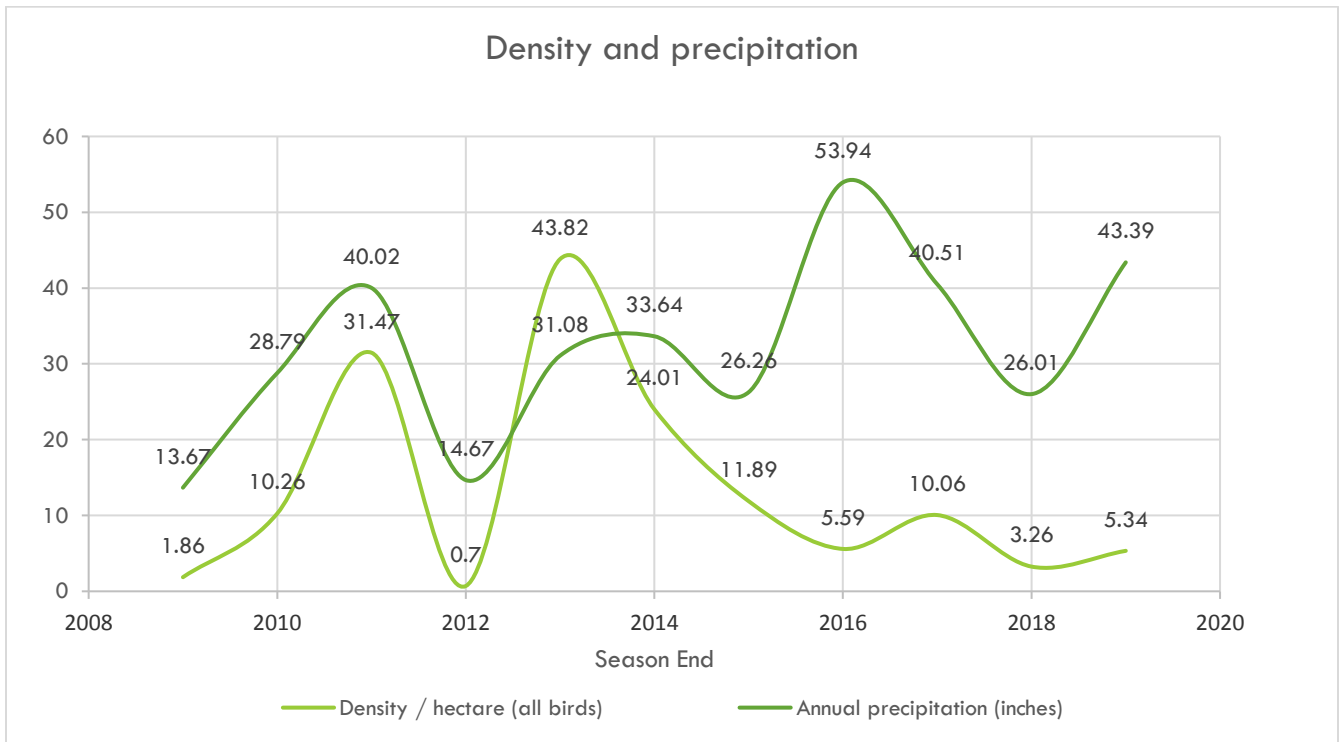


Table 1. and Figure 1. The 2018-2019 season resulted in an average annual density of 5.34/ hectare for all bird species. Annual rainfall year ending 2018 was 43.39 inches. Only the annual cumulative precipitation was considered for this report. Analysis of monthly precipitation data may be warranted in the future.

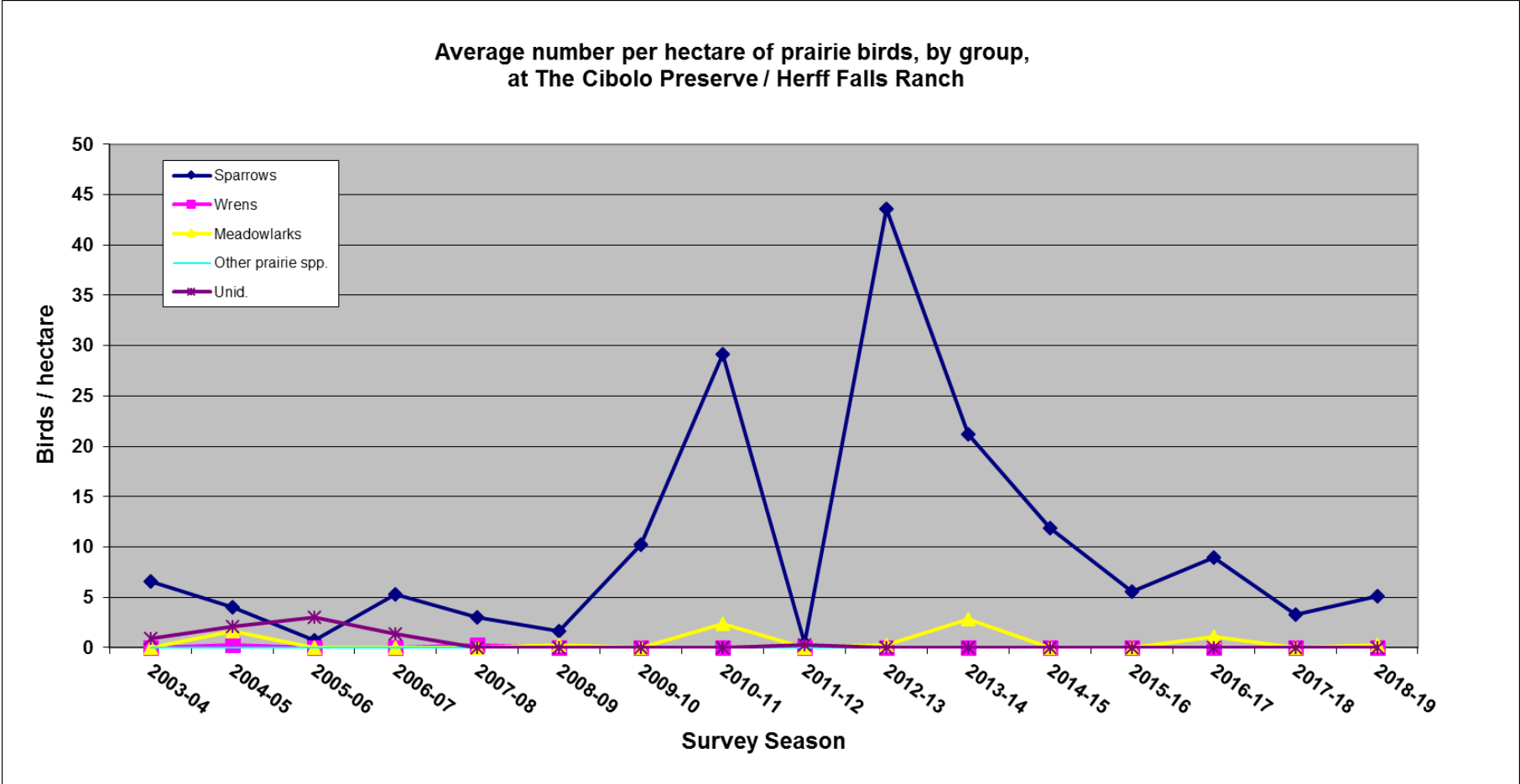


Figure 2. Density of all prairie birds observed, by group, since survey inception. Sparrows are the predominant group.

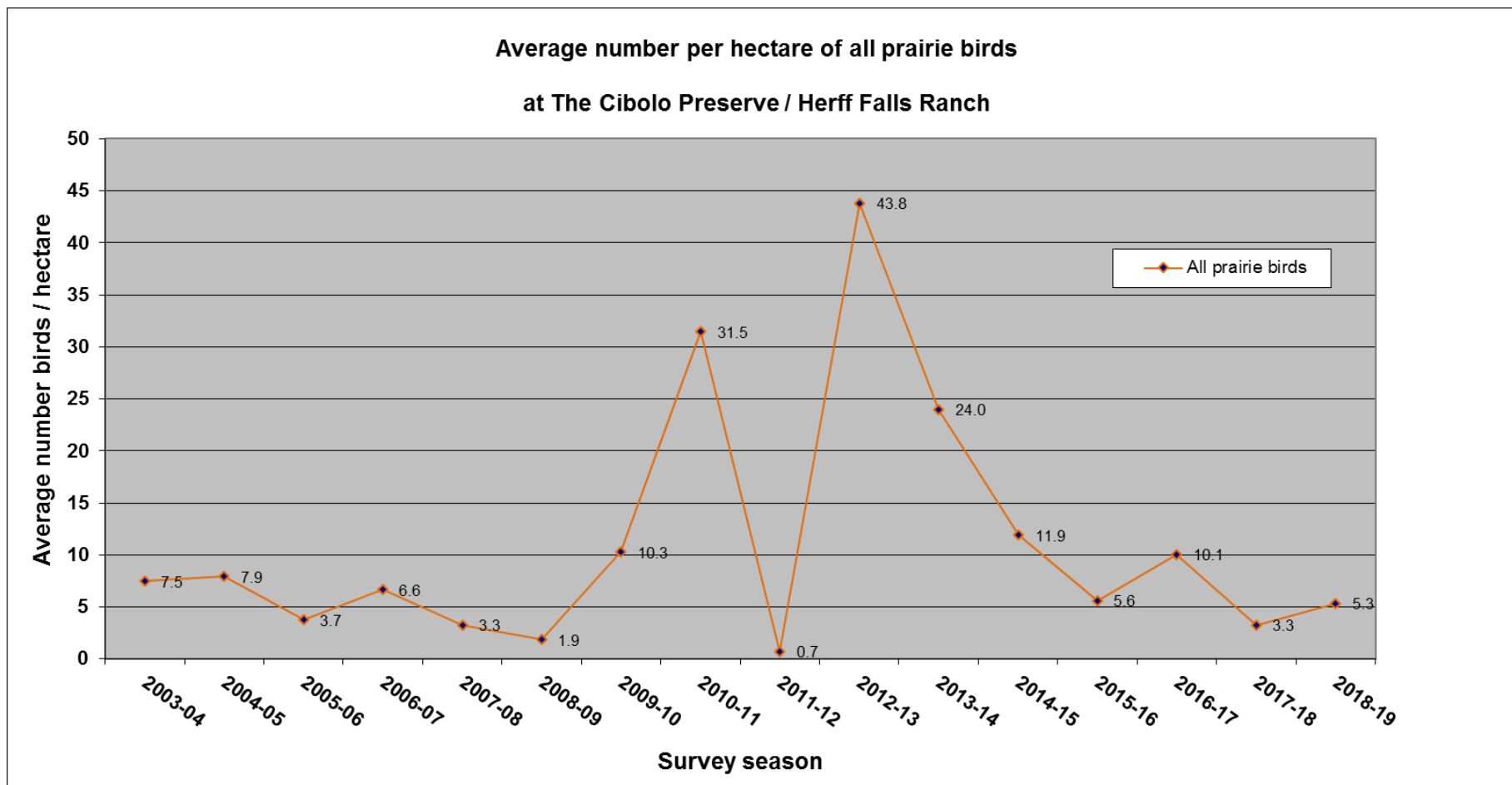


Figure 3. Density of all prairie birds combined for each year observed since survey inception.

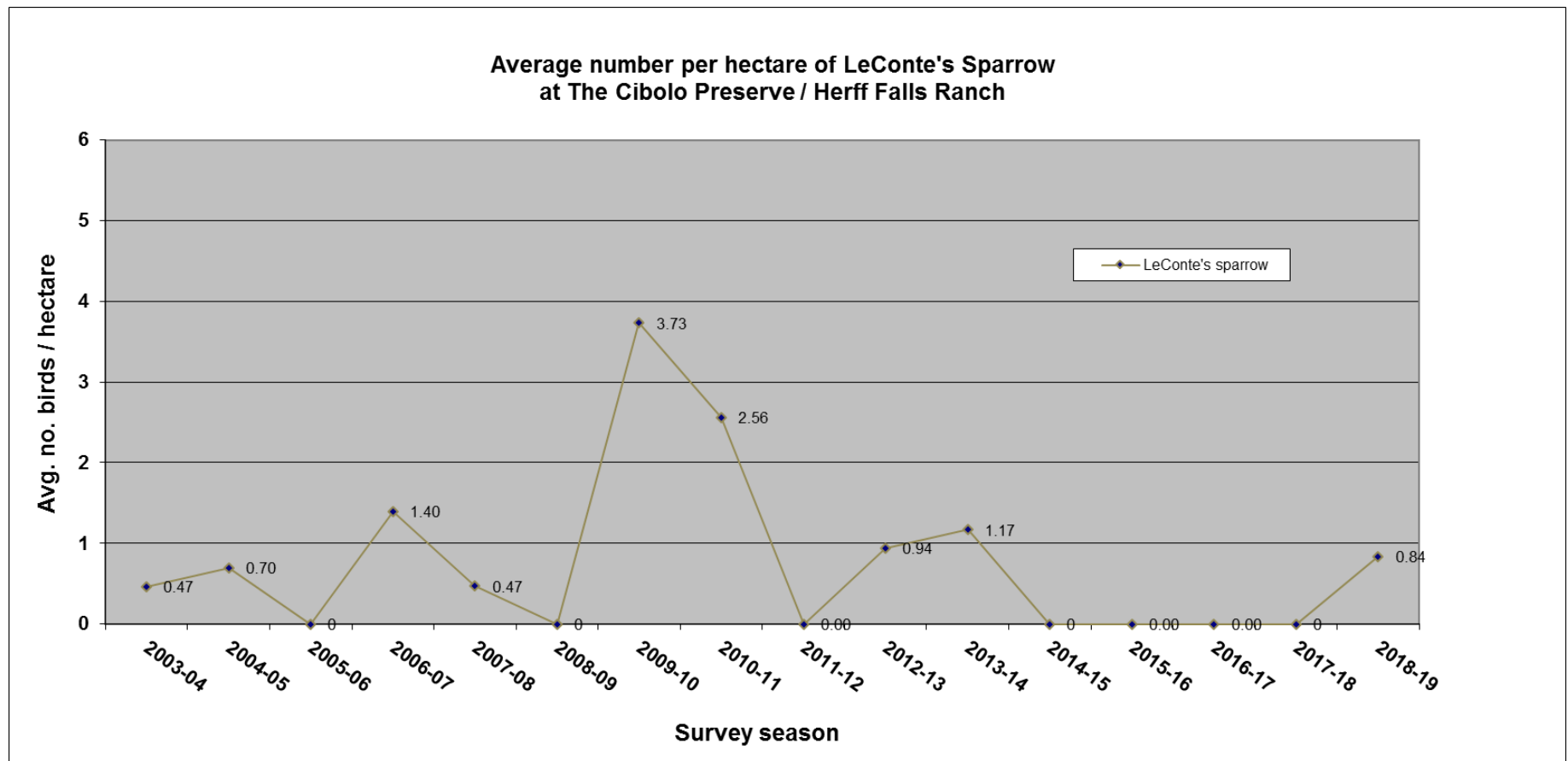


Figure 4. Density of LeConte's Sparrow per hectare for each year observed since survey inception

This page is reserved for the raw data sheets

File name: CP_WPB_2018_2019data

Attached digitally