



Texas Parks and Wildlife Department

Dove Population Status - 2023



O. N. Fitzsimmons

Wildlife Division, Texas Parks and Wildlife Department

July 2023

BACKGROUND

On average, Texas accounts for 30% of the total mourning dove harvest and 87% of the total white-winged dove harvest in the United States each year. Approximately 300,000 hunters take the field in Texas annually, resulting in a yearly economic impact of \$316 million (\$478 million when adjusted for inflation) (Southwick and Allen 2007).

Regular monitoring of dove populations is essential to effectively managing and conserving such an important recreational and biological resource. Since 2008, Texas Parks and Wildlife Department (TPWD) has conducted rural and urban dove surveys using distance sampling (Buckland et al. 1993) each May-June to estimate annual spring breeding abundance, except for 2020 when surveys were cancelled due to restrictions from the COVID-19 pandemic. This report provides updated results on the status of breeding dove populations in 2023. Estimates are calculated and reported by Bird Conservation Region (BCR) (Bird Studies Canada 2014, US NABCI Committee 2000) in Texas (Figure 1). A comprehensive report that includes survey results from 2008-21 and detailed descriptions of survey and analyses methodologies was released in 2021 (Fitzsimmons et al. 2021).

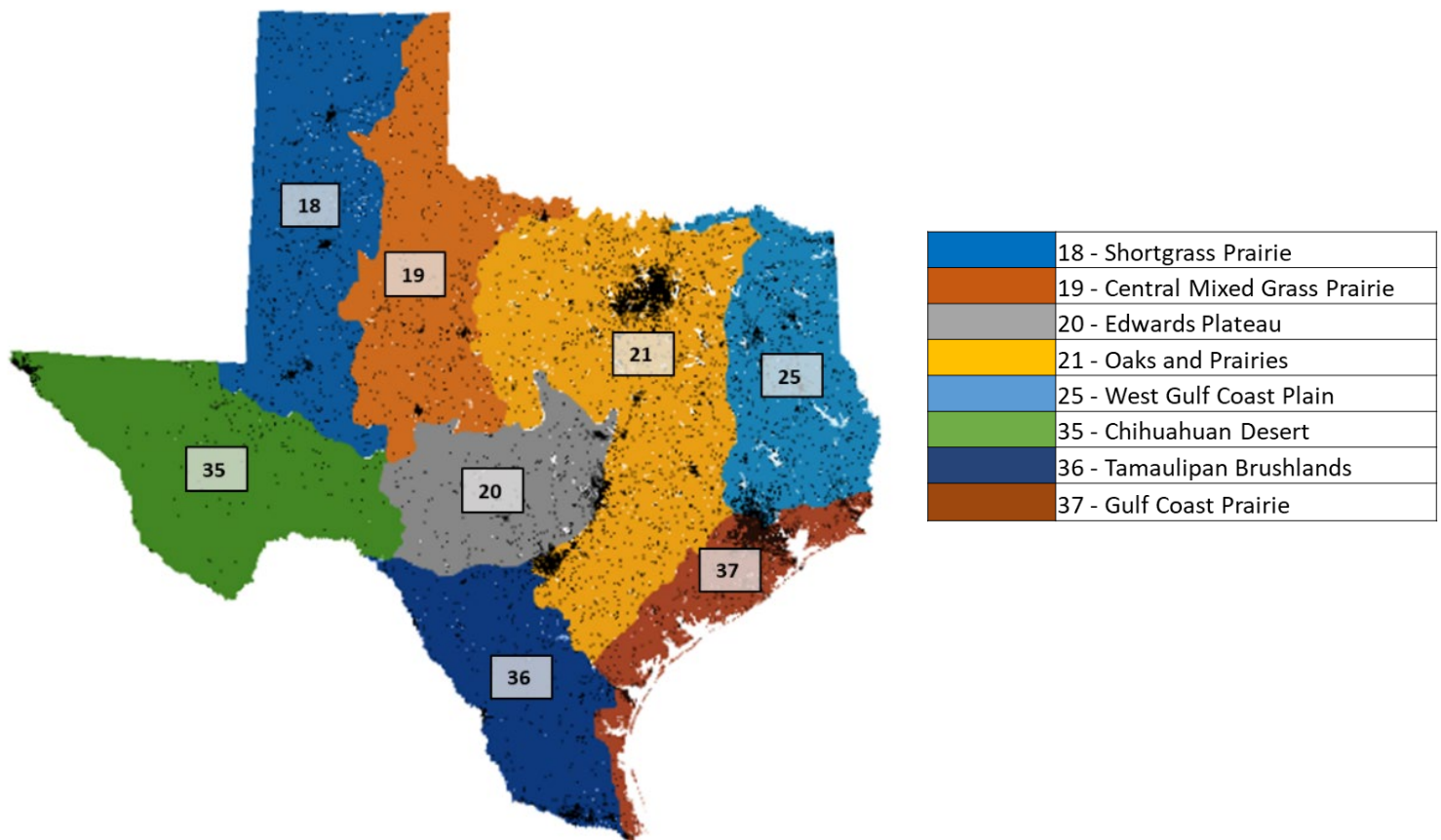


Figure 1. Bird Conservation Regions of Texas

STATUS – STATEWIDE

This section highlights trends in annual statewide abundance, percent composition of statewide abundance by BCR – both current year and long-term average (2008-22), and rural and urban abundance estimates by BCR for mourning and white-winged doves in Texas.

Mourning Dove

Mourning doves are the most popular and most numerous game bird in the US, with a range that extends throughout most of North America. Texas supports a large population of both resident and migratory mourning doves.

From 2008-23, abundance ranged from a low of 19.8 million in 2022 to a high of 37.5 million in 2016. The 2023 statewide abundance estimate is 28.3 million, which is a 44% increase from 2022 and 3% above the long-term average (Figure 2). An estimated 89% occurred in rural areas compared to urban areas (11%) in 2023 (Figure 3), and, on average, densities in urban areas were 2.1 times greater than in rural areas.

On average, nearly 70% of the state's mourning doves occur in the Shortgrass Prairie (32%), Oaks and Prairies (26%), and Tamaulipan Brushlands (11%) BCRs each year (Figure 4). In 2023, abundance increased in every BCR across the state, with the largest increase occurring in the Central Mixed Grass Prairie (129%). Abundance estimates in all BCRs were above long-term averages, except for the Shortgrass Prairie (-31%) (see Status-Regional section below).

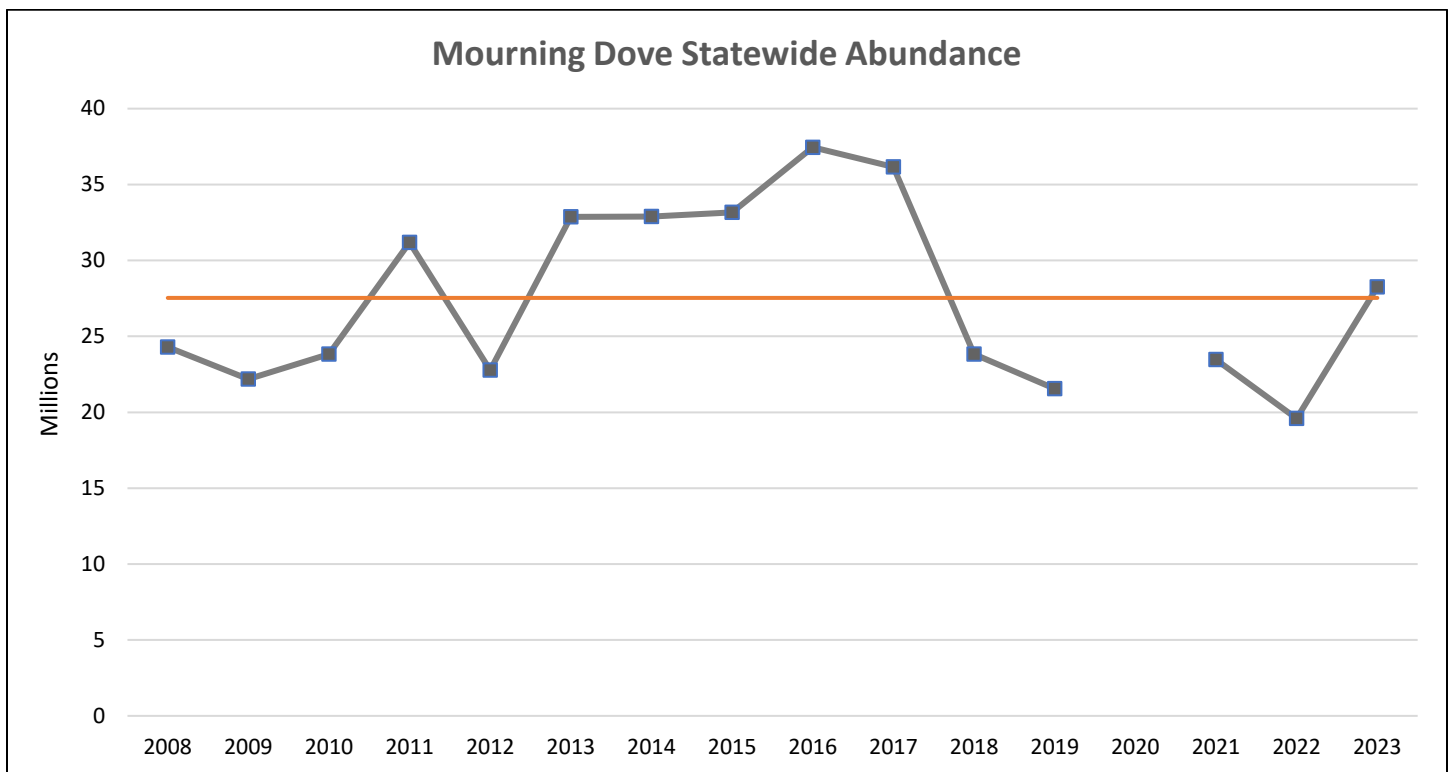


Figure 2. Combined rural and urban breeding abundance of mourning doves. The long-term average (2008-22), represented by the orange line, is 27.5 million.

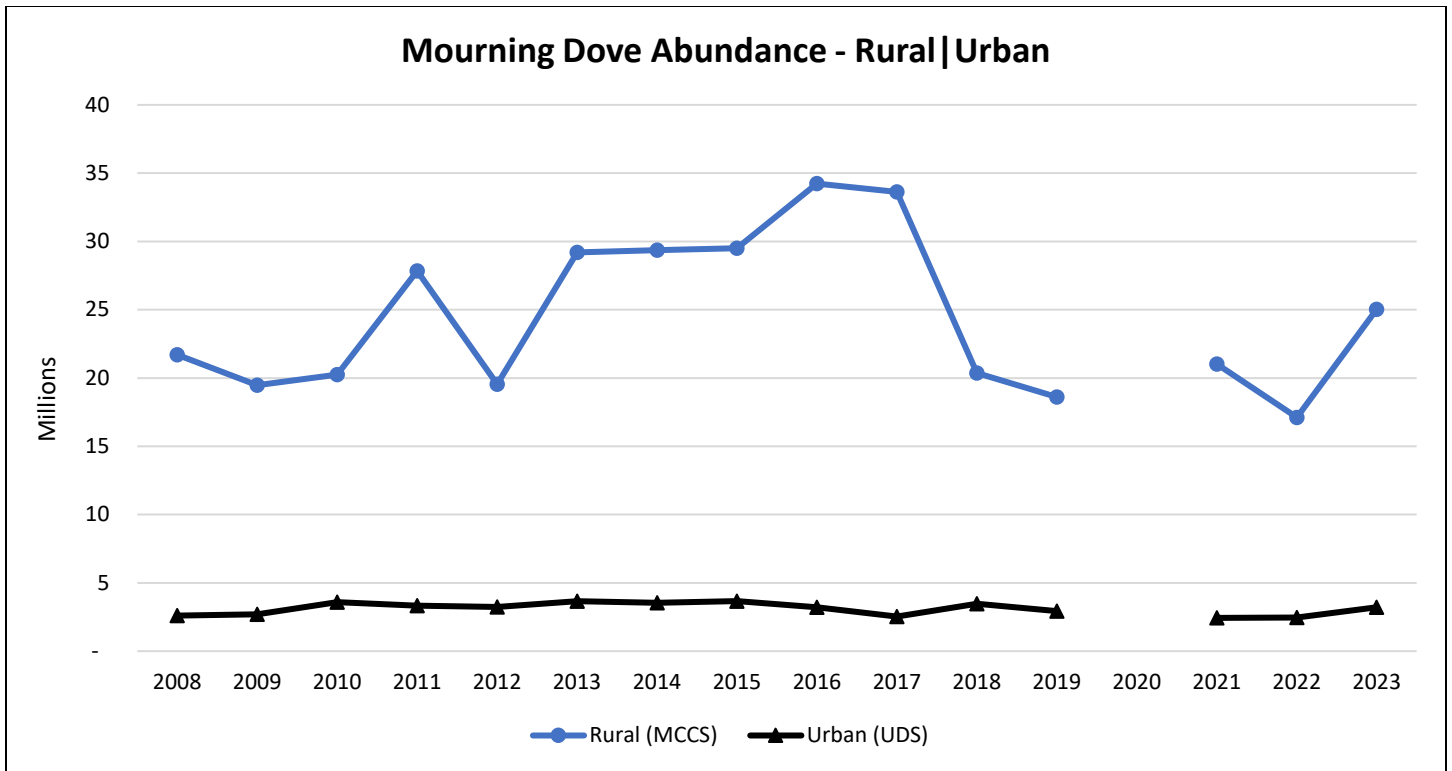


Figure 3. Statewide mourning dove abundance by survey type – Rural, based on Modified Call-Count Surveys (MCCS) and Urban, based on Urban Dove Surveys (UDS).

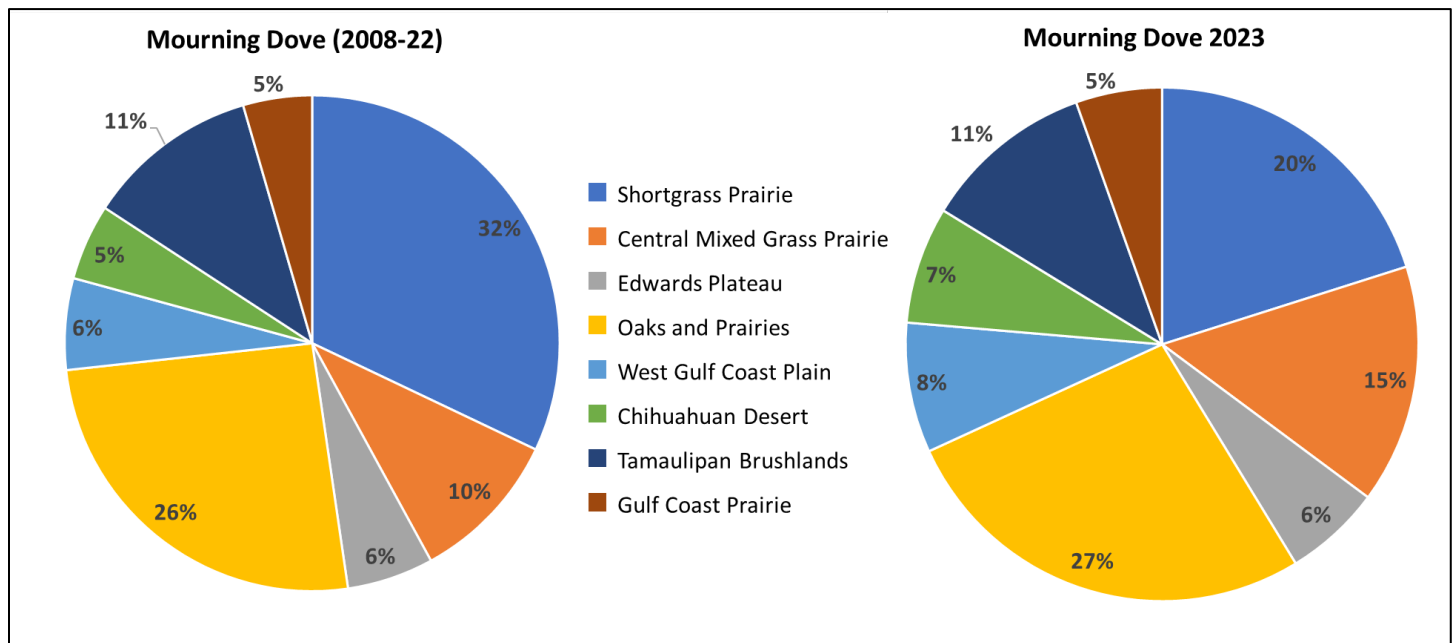


Figure 4. Percent composition of statewide mourning dove abundance in Texas BCRs, long-term average (2008-22) and 2023.

White-winged Dove

Historically restricted to the lower Rio Grande Valley, white-winged doves have expanded across most of the state since the 1990s and continue to expand range-wide throughout much of the southwest US. Outside of the Rio Grande Valley, white-winged doves are strongly associated with urban habitat in Texas.

From 2008-23, estimated abundance ranged from a low of 6.7 million in 2008 to highs of 11.7 million in 2015 and 2023. The 2023 statewide abundance estimate is 11.7 million, which is a 20% increase from 2022 and 19% above the long-term average (Figure 5). An estimated 85% occurred in urban areas compared to rural areas (15%) (Figure 6), and, on average, densities in urban areas were 213 times greater than in rural areas in 2023.

On average, over 70% of the state's white-winged doves are found in the Oaks and Prairies (38%), Tamaulipan Brushlands (20%), and Gulf Coast Prairie (13%) BCRs each year (Figure 7). In 2023, the Shortgrass Prairie BCR saw the largest increase in white-winged doves (149%), making up 20% of the statewide total. The Oaks and Prairies, West Gulf Coast Plains (Pineywoods), and Tamaulipan Brushland BCRs experienced slight declines from 2022, otherwise abundance estimates increased in all other BCRs year-over-year (see Status-Regional section below).

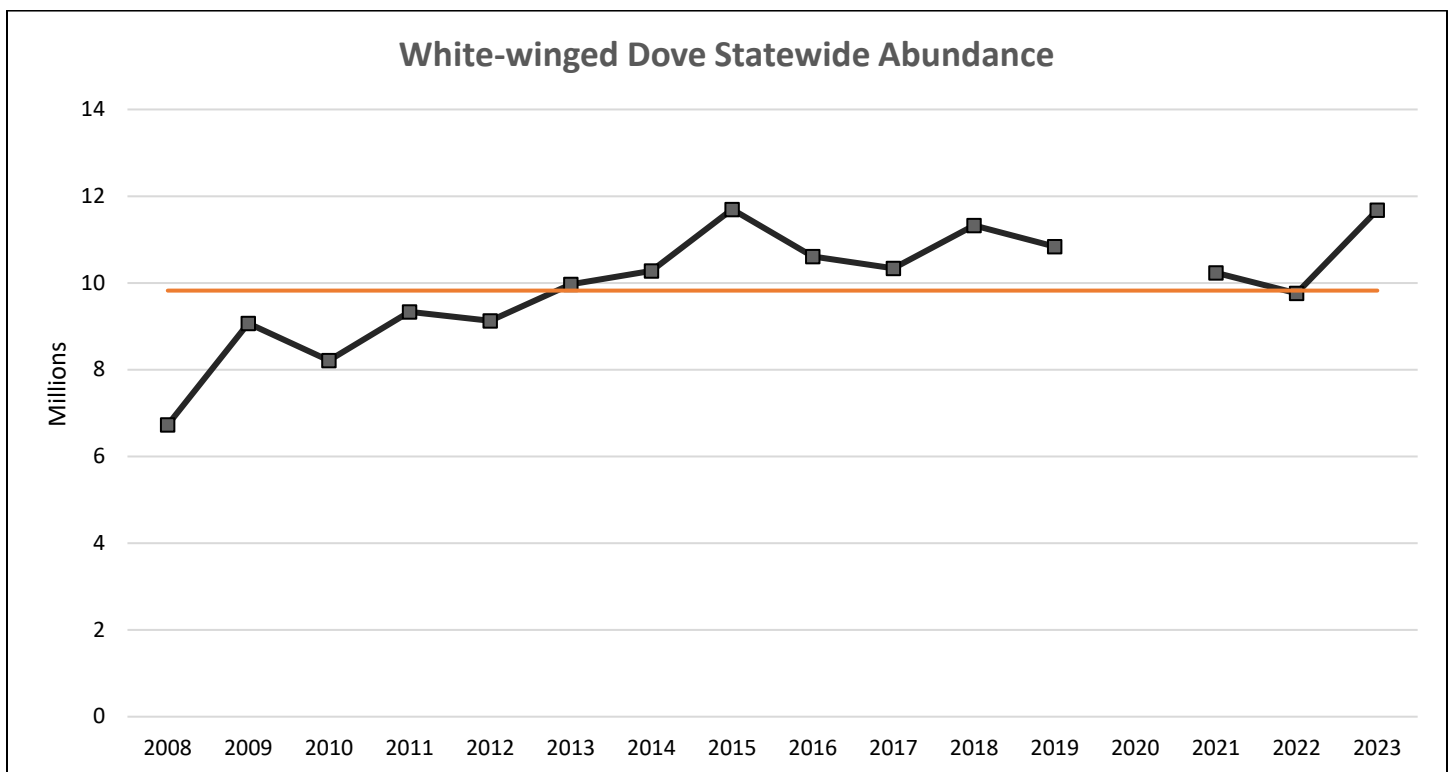


Figure 5. Combined rural and urban breeding abundance of white-winged doves. The long-term average (2008-22), represented by the orange line, is 9.8 million.

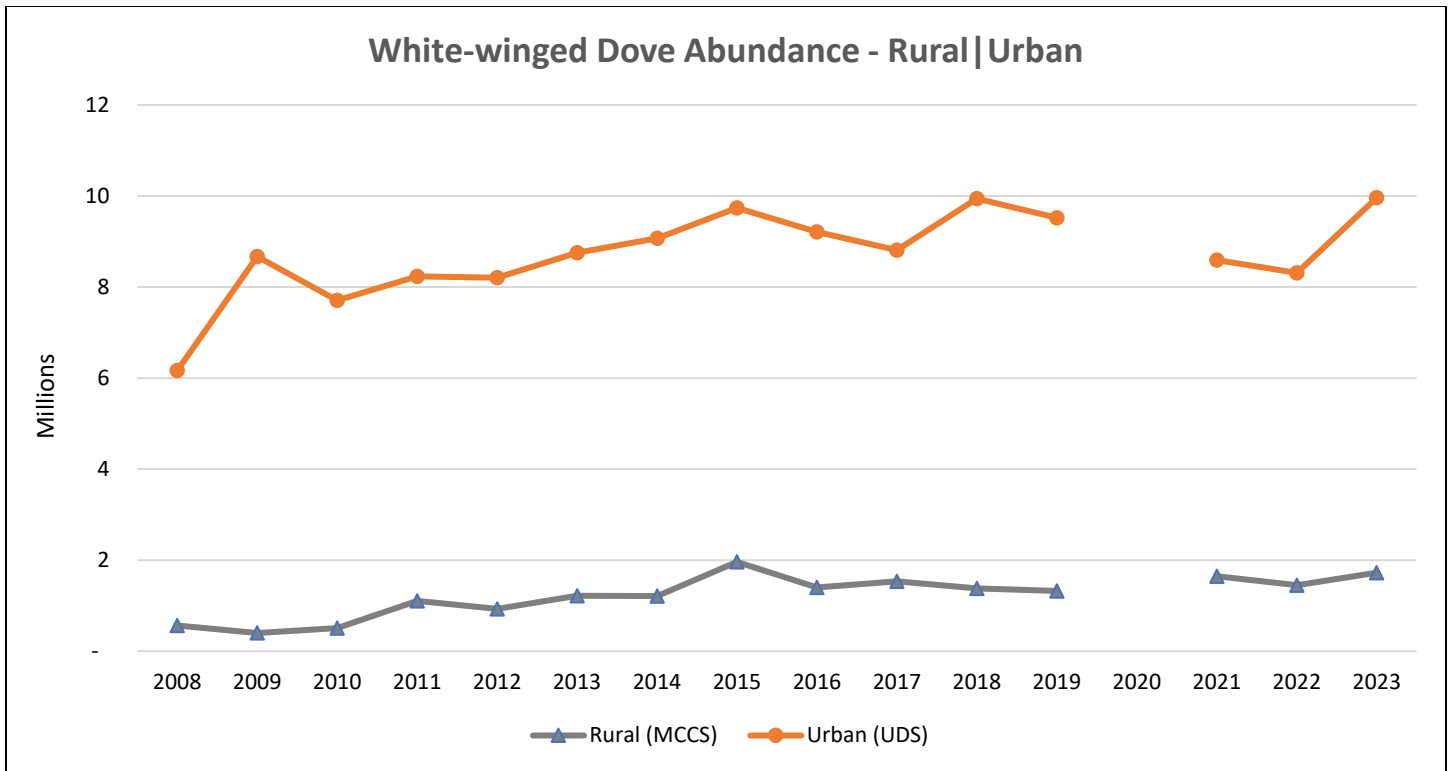


Figure 6. Statewide white-winged dove abundance by survey type – Rural, based on Modified Call-Count Surveys (MCCS) and Urban, based on Urban Dove Surveys (UDS).

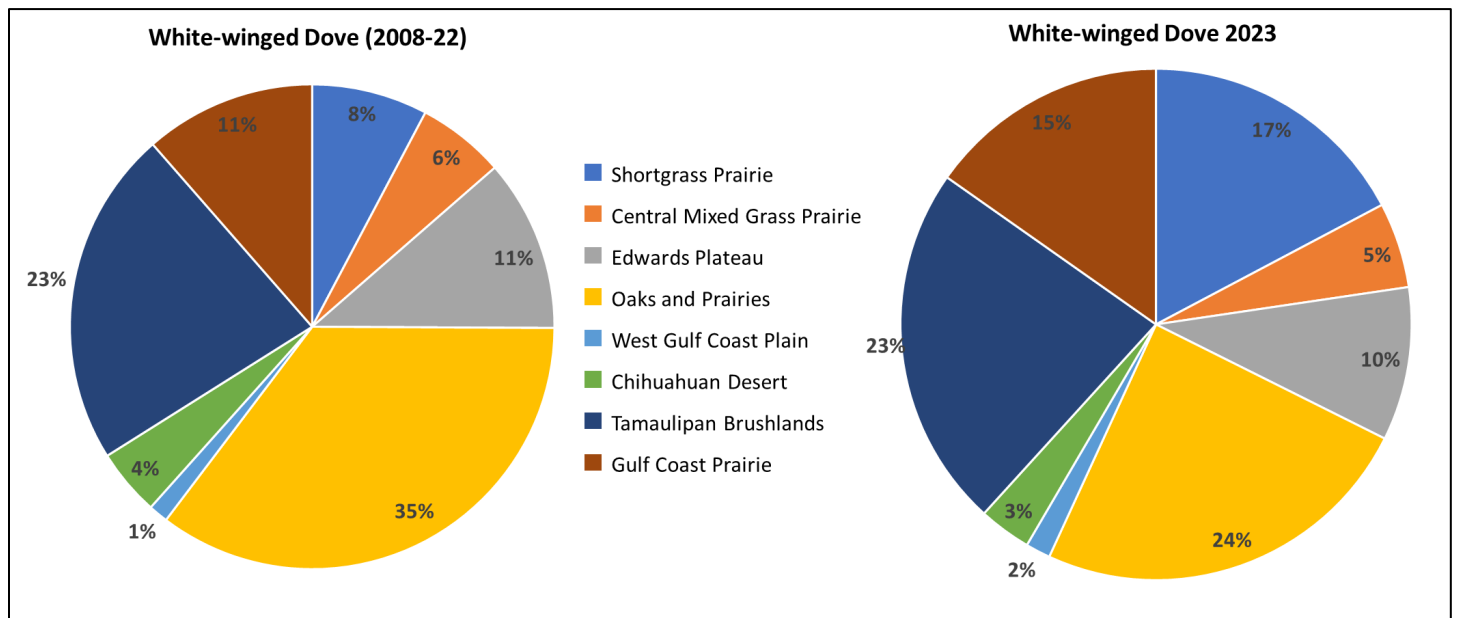
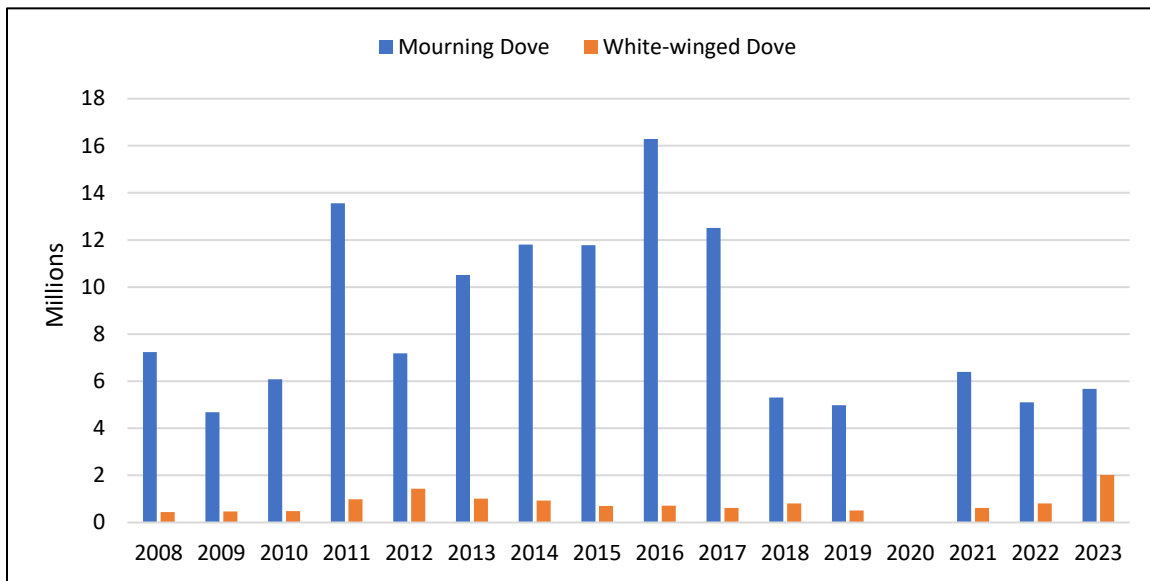


Figure 7. Percent composition of statewide white-winged dove abundance in Texas BCRs, long-term average (2008-22) and 2023.

STATUS – REGIONAL

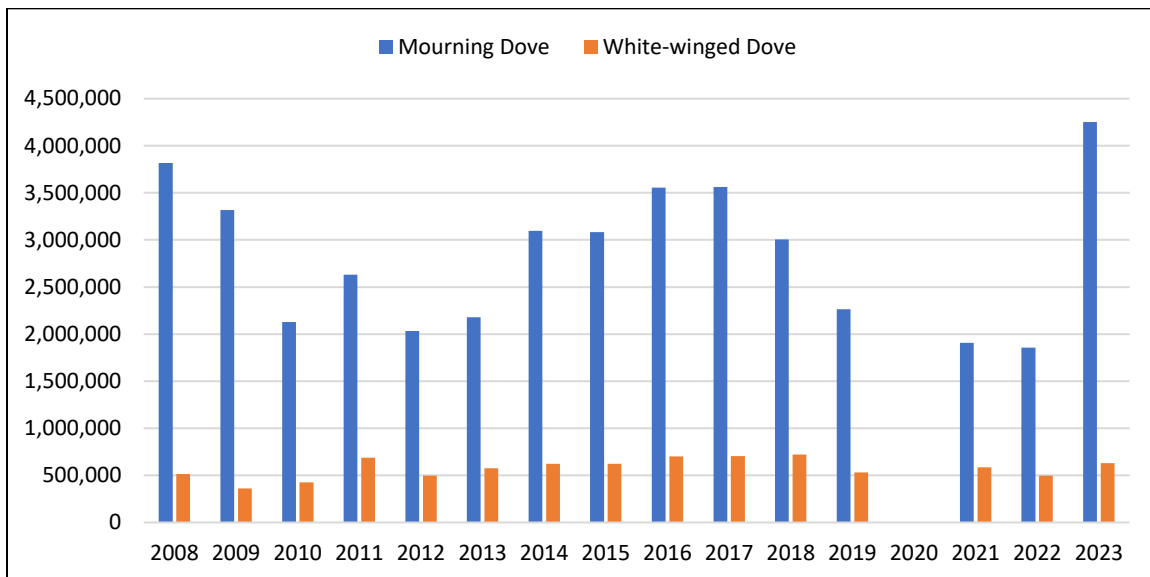
The following section highlights BCR trends in annual abundance (2023 N), percent changes from the 2008-22 long-term average to the current year (% change LTA), and year-over-year percent changes from 2022 to 2023 (% change YOY).

BCR 18 - Shortgrass Prairie (High Plains)



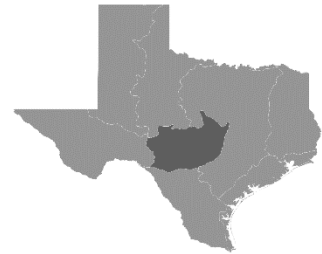
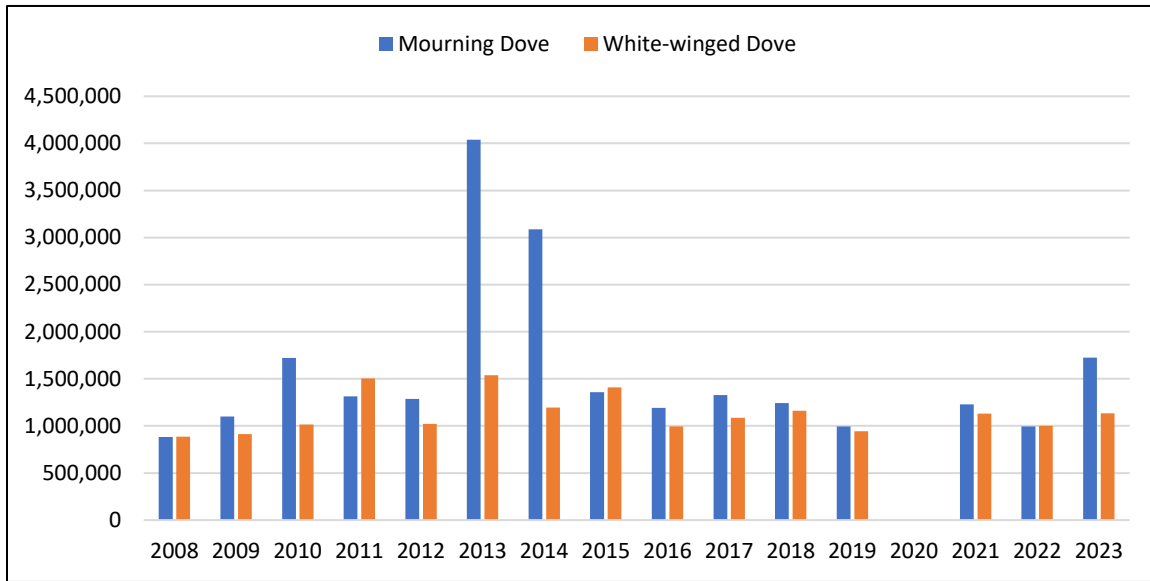
	2023 N	% change LTA	% change YOY
Mourning Dove	5,681,379	-30.9%	11.3%
White-winged Dove	2,015,486	186.7%	149.0%

BCR 19 - Central Mixed Grass Prairie (Rolling Plains)



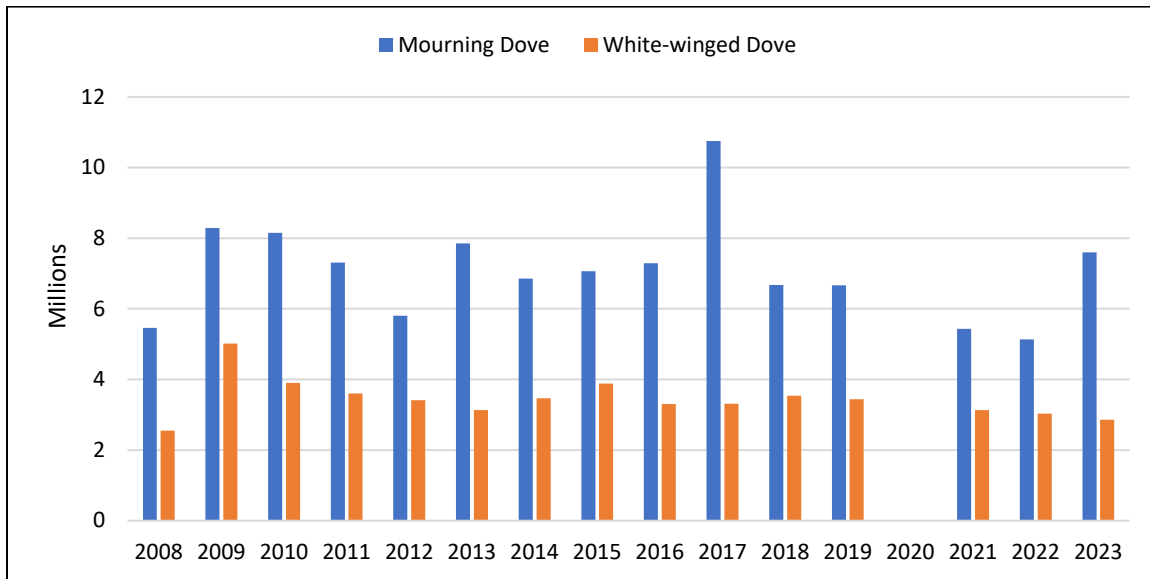
	2023 N	% change LTA	% change YOY
Mourning Dove	4,251,919	65.9%	129.0%
White-winged Dove	631,084	17.6%	27.1%

BCR 20 - Edwards Plateau



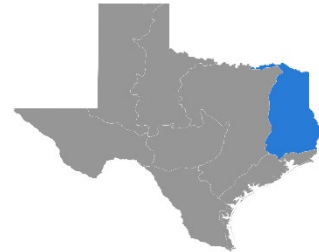
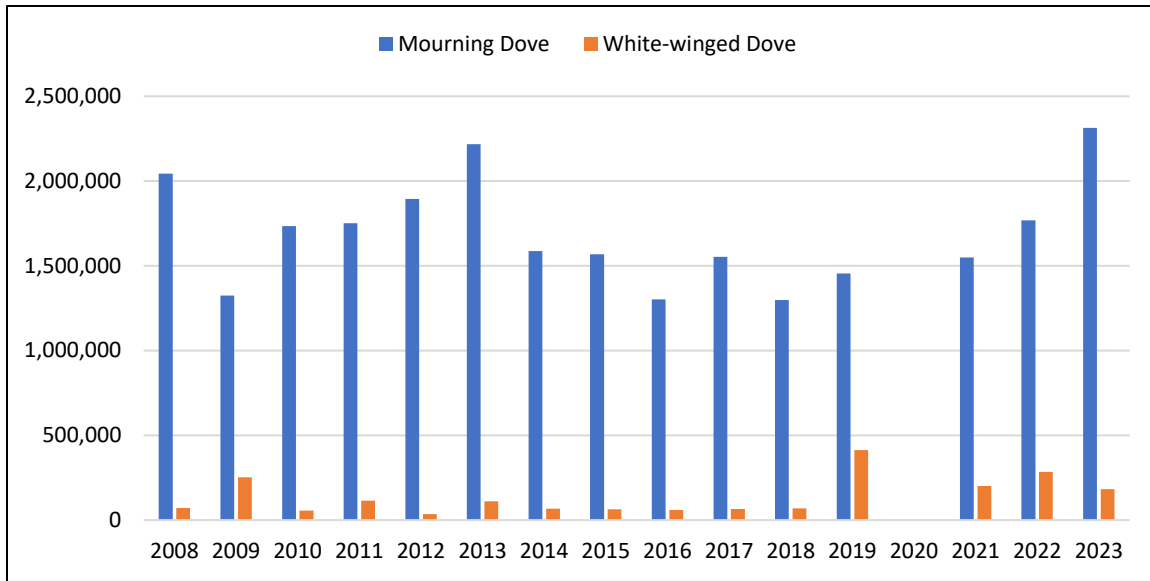
	2023 N	% change LTA	% change YOY
Mourning Dove	1,726,644	18.9%	73.4%
White-winged Dove	1,133,432	7.6%	13.1%

BCR 21 - Oaks and Prairies



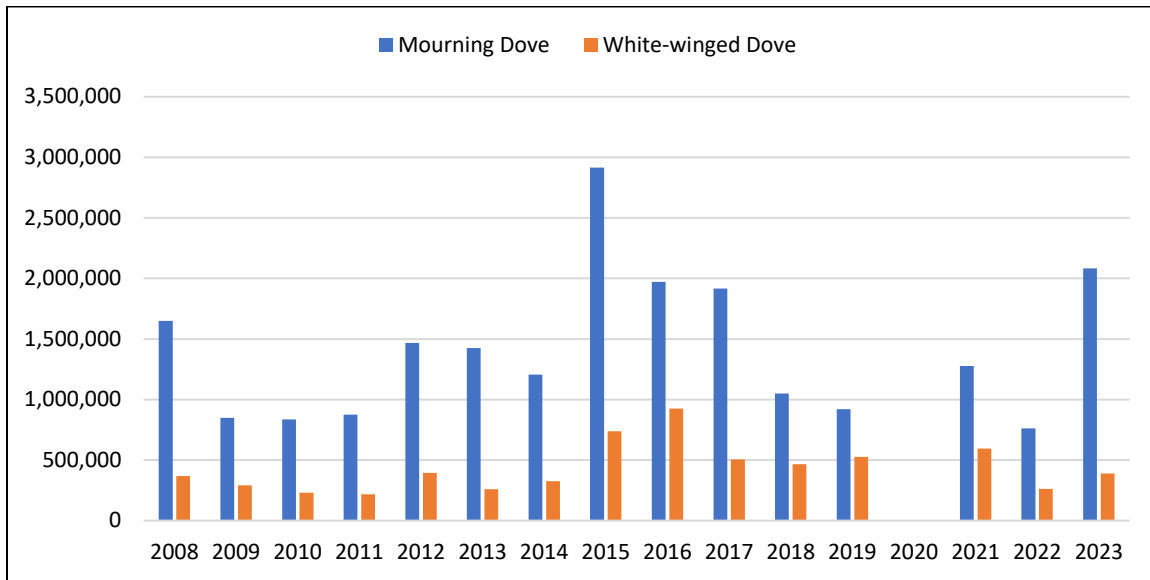
	2023 N	% change LTA	% change YOY
Mourning Dove	7,597,648	15.4%	48.0%
White-winged Dove	2,860,895	-11.9%	-5.7%

BCR 25 - West Gulf Coast Plain (Pineywoods)



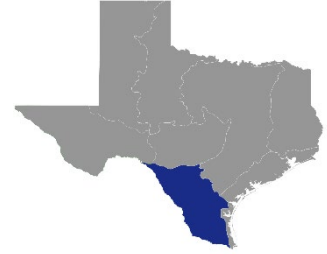
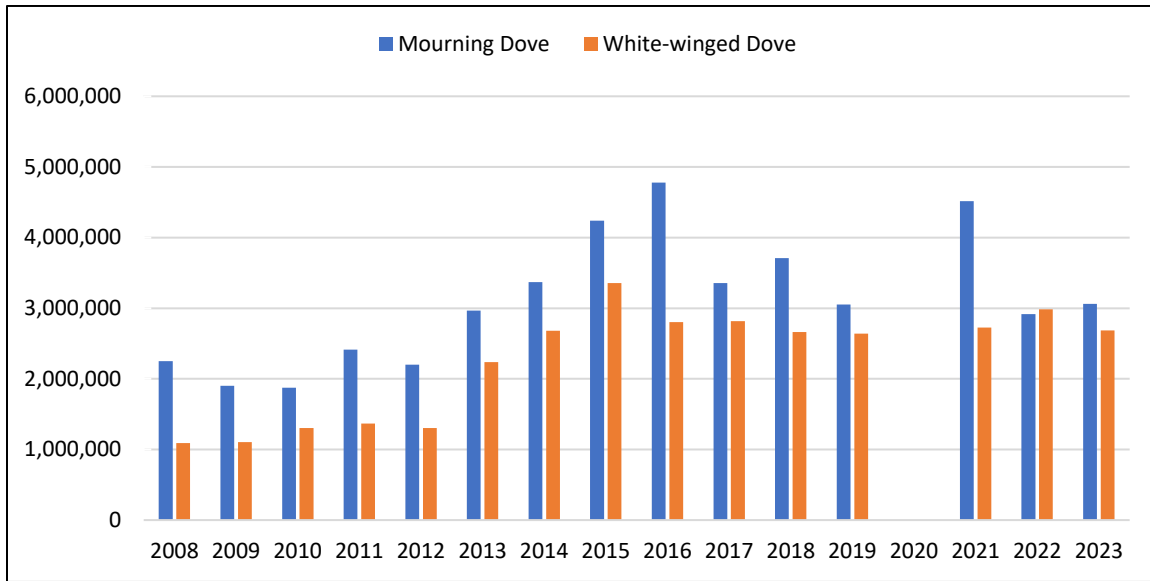
	2023 N	% change LTA	% change YOY
Mourning Dove	2,313,549	50.6%	30.8%
White-winged Dove	183,398	47.3%	-35.6%

BCR 35 - Chihuahuan Desert (Trans-Pecos)



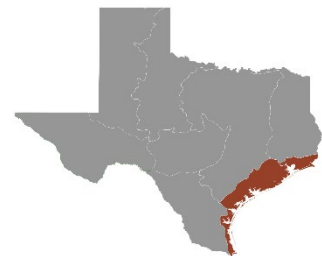
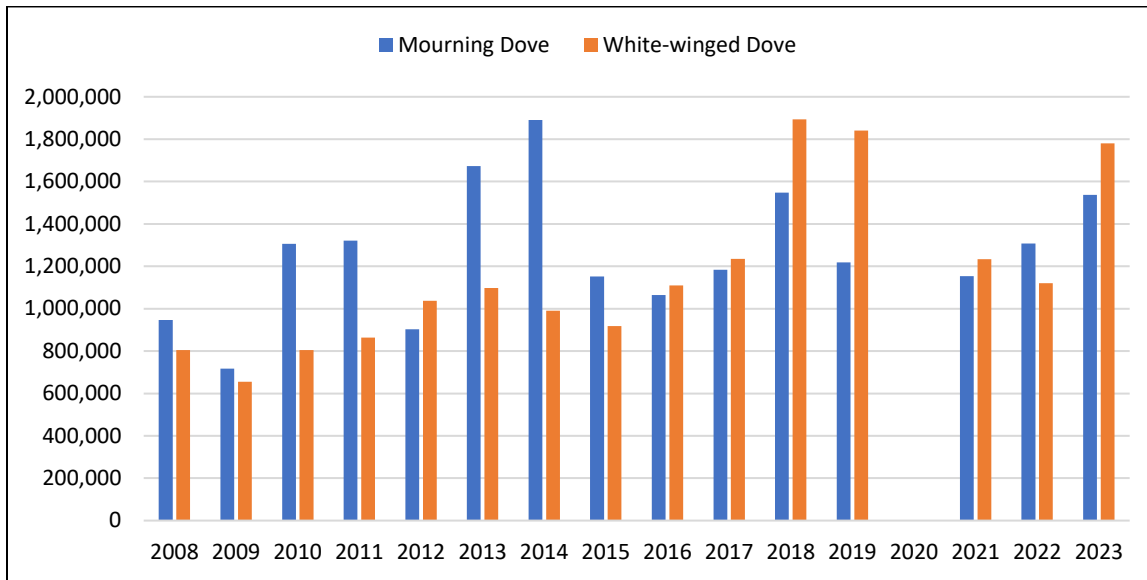
	2023 N	% change LTA	% change YOY
Mourning Dove	2,082,477	63.4%	173.6%
White-winged Dove	388,029	-4.6%	47.5%

BCR 36 - Tamaulipan Brushlands



	2023 N	% change LTA	% change YOY
Mourning Dove	3,060,320	5.4%	5.0%
White-winged Dove	2,686,688	29.7%	-10.0%

BCR 37 - Gulf Coast Prairie



	2023 N	% change LTA	% change YOY
Mourning Dove	1,536,555	32.6%	17.5%
White-winged Dove	1,780,043	71.1%	58.9%

LITERATURE CITED

Bird Studies Canada and North American Bird Conservation Initiative Committee. 2014. Bird Conservation Regions. Published by Bird Studies Canada on behalf of the North American Bird Conservation Initiative.
<http://www.birdscanada.org/research/gislab/index.jsp?targetpg=bcr>

Buckland, S. T., D. R. Anderson, K. P. Burnham, and J. L. Laake. 1993. Distance sampling: estimating abundance of biological populations. Chapman and Hall, London, UK.

Fitzsimmons, O. N., R. R. Fern, S. L. Oldenburger. 2021. Dove population status and harvest, 2021. Texas Parks and Wildlife Department, Austin, TX.

Southwick, R. and T. Allen. 2007. The 2006 economic benefits of hunting, fishing, and wildlife watching in Texas. Southwick Associates, Inc., Florida, USA.

United States North American Bird Conservation Initiative Committee (US NABCI Committee). 2000. North American Bird Conservation Initiative: Bird Conservation Regions map. Arlington, Virginia, USA: U. S. Fish and Wildlife Service.