

Lights Out Dallas

Fall 2023 Highlights & Observations




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Texas Conservation Alliance


As we wrap up an incredible Fall season, we're excited to share some key highlights and observations! The data collected during Lights Out surveys helps us understand how different areas of Downtown impact birds as they migrate through Dallas. A huge thank you to everyone who participated; your support is instrumental to our work and the foundation of our success.


Equally crucial to our success is the power of partnerships and collaborations. Our partner organizations are the catalysts of our outreach and impact in Texas. Working together, we will continue to achieve greater awareness of the dangers that light pollution poses to migratory wildlife and inspire positive change.


Collision Survey Results


Fall 2023 is our 7th season documenting window collisions in Downtown Dallas. A total of **479** bird-building collisions were documented this season, which includes **380** mortalities, **62** rescued birds, and **37** stunned birds that hit windows and flew away.


 <h3>Lights Out Dallas</h3> <h4>Downtown Dallas Bird Collision Survey Results</h4>								
	Surveys Completed	Mortalities Collected	Rescues Conducted	Species Documented	Volunteers Engaged	Volunteer Hours Served	Miles Surveyed	Lights Out for Wildlife Certifications Secured
Fall 2023	80	380	62	54	66	733	560	60
Spring 2023	80	253	25	49	58	681	572	48
Fall 2022	80	323	28	51	82	751	597	49
Spring 2022	80	310	41	56	74	882	593	213
Fall 2021	78	399	40	56	30	555	658	82
Spring 2021	57	228	17	52	37	657	439	145
Fall 2020	80	457	21	53	30	529	682	-
Total	535	2350	234	105	-	4788	4101	597






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Volunteer Appreciation

A heartfelt thank you to our amazing volunteer leaders! Your dedication and leadership have been the driving force behind the success of Lights Out Dallas. Your passion and commitment inspire us all. We're grateful for your tireless efforts, creative thinking, and the positive impact you've made on our program. Here's to our outstanding volunteer leaders – thank you for making a difference!



Get ready to cheer! We're thrilled to announce that 40 of our incredible volunteers earned their well-deserved volunteer pins this year. These individuals have gone above and beyond, dedicating their time and passion to make a meaningful impact in our program. Join us in celebrating their commitment to making a difference in our community.

Cheers to our fantastic volunteers – your hard work shines bright, and we're grateful for each and every one of you!



Fall 2023 Highlights

Encouraging Building Support

Renowned for its light show, Reunion Tower set aside its shimmering facade to support a darker sky for millions of migratory birds passing through Dallas during peak migration in October. The iconic building has dimmed its bulbs for three years, ensuring a darker night sky during this critical period.

"As an icon of the city of Dallas, Reunion Tower takes pride in contributing to the protection of migrating birds throughout North Texas. We encourage the entire city to join us in supporting this important initiative," shared Jenna Guinn from Reunion Tower's Operations team.

This action resonated strongly on social media, engaging a wide audience and garnering applause for their commitment to migratory bird conservation. Even when its lights are dimmed, Reunion Tower maintains its iconic presence. It stands out by taking action, and becoming a beacon that draws our attention. We extend our gratitude to Reunion Tower for leading by example and inspiring others to follow.



Broadened Outreach

The campaign's reach expanded significantly through community outreach events and presentations. Collaborating with partners in the DFW area, we engaged audiences previously unaware of light pollution and its impact on migratory birds. At these events, we utilized visual aids to illustrate the adverse effects of glass reflections and disruptive lights on birds. Furthermore, our participation at the Texas Master Naturalist Annual Meeting in October allowed us to connect with potential community educators across the state. This outreach effort empowered us to amplify our message, widely distribute resources, and contribute to fostering positive change on a larger scale.

Documented Three New Species

Lights Out Dallas documented three new species this fall: Vesper Sparrow (*Pooecetes gramineus*), Western Kingbird (*Sturnella neglecta*), and Olive-sided Flycatcher (*Contopus cooperi*). This is interesting because none of these species occurs in high numbers in the Dallas area. The more seasons we add to our dataset, the greater the probability of finding uncommon species such as these during surveys. Since the Fall of 2020, Lights Out Dallas has documented bird-building collisions in 105 species, including 87 species of songbirds. Thankfully, the Vesper Sparrow found this fall was only stunned. It was rescued by the Lights Out volunteers and later transferred to a rehabilitation facility for further care.



Vesper Sparrow (top left & top right), Western Meadowlark (top middle, bottom left, & bottom middle), and Olive-sided Flycatcher (bottom right)

Photo credit: Heather Bullock & Katie Emmons

Fall 2023 Observations

Species Prevalence Similar to Fall 2021 and Fall 2022

Species prevalence this fall was similar to the past two falls but with some noticeable differences, as seen in the graph below showing the top collision fatalities by species. The number one most frequently found collision this season was Lincoln's Sparrow (*Melospiza lincolnii*) rather than White-throated Sparrow (*Zonotrichia albicollis*). The Grasshopper Sparrow (*Ammodramus savannarum*) ranked third in mortalities, with more than twice as many found this fall than in the last two falls. This is concerning since this species is classified as Vulnerable in Texas and has been in steep decline across its range since 1970.^{1,2} Also classified as Vulnerable in Texas, the American Woodcock (*Scolopax minor*) ranked fourth in mortalities, with similar numbers to prior years.

The next four places are held by warblers: the Orange-crowned Warbler (*Leiothlypis celata*), Common Yellowthroat (*Geothlypis trichas*), Mourning Warbler (*Geothlypis philadelphia*), and Nashville Warbler


(*Leiothlypis ruficapilla*). Notably, significantly fewer Mourning Warblers were found this season than in Fall 2021. This is likely because Mourning Warblers are relatively early fall migrants, and surveys began one week earlier in 2021. The House Wren (*Troglodytes aedon*) and Field Sparrow (*Spizella pusilla*) tied in ninth place, with nine fatalities for each species.

On a positive note, after being among the top 10 collision fatalities in Fall 2021 and 2022, only four Black-and-white Warbler (*Mniotilta varia*) fatalities were found this season, compared to 12 fatalities in Fall 2021 and eight fatalities in Fall 2022. This is encouraging news since this species is known to be highly vulnerable to building collisions.³



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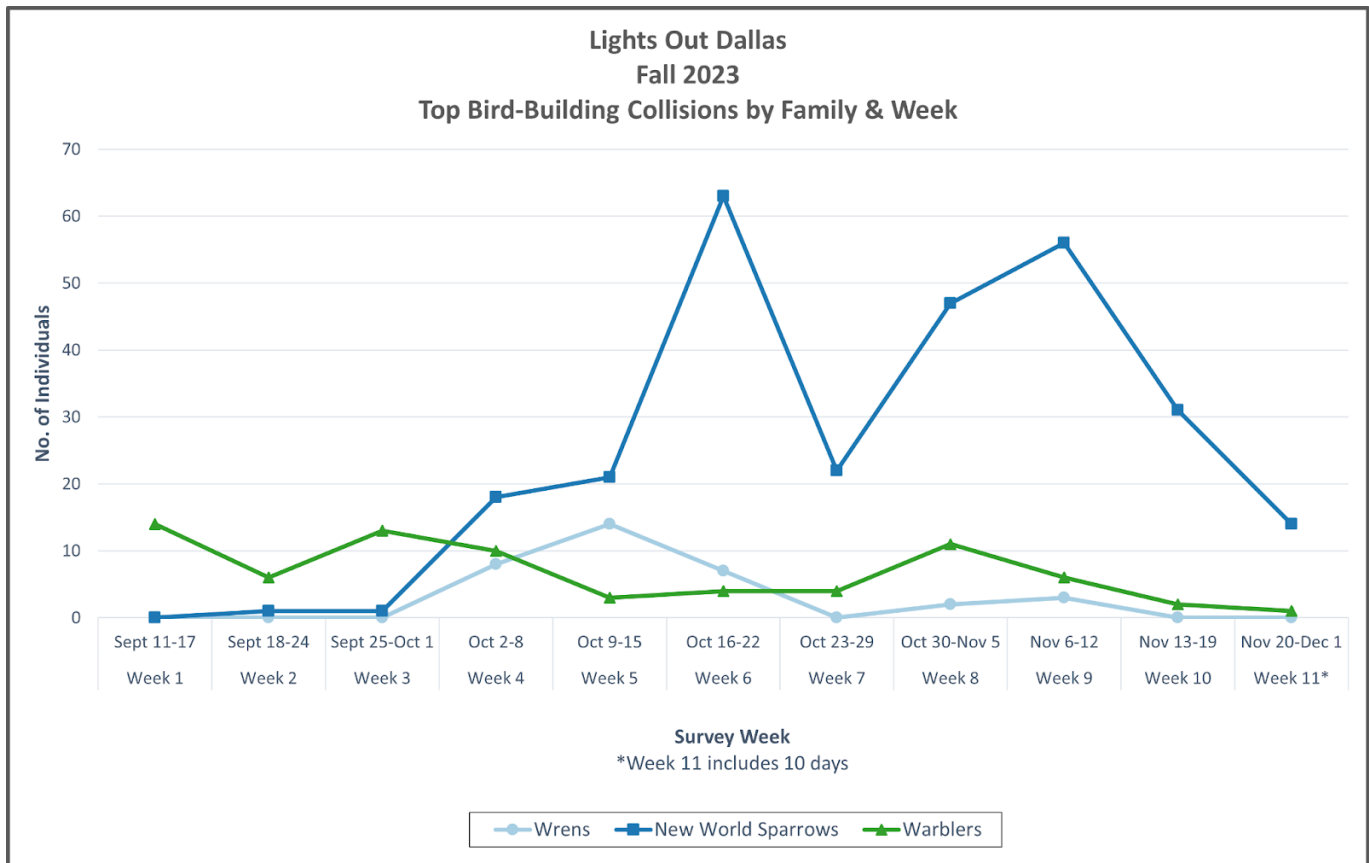
Top Fall Mortalities by Species

Species Common Name	Fall 2023 (80 Surveys)	Fall 2022 (80 Surveys)	Fall 2021 (78 Surveys)
Lincoln's Sparrow 	85	32	53
White-throated Sparrow 	66	74	82
Grasshopper Sparrow 	36	17	15
American Woodcock 	14	12	17
Orange-crowned Warbler 	12	2	3
Common Yellowthroat 	10	8	5
Mourning Warbler 	10	11	32
Nashville Warbler 	10	12	7
House Wren 	9	9	16
Field Sparrow 	9	12	10

Composition of Survey Results Changes Throughout Season

As we have seen in previous years, the family composition of survey results changed throughout the season this fall. For the first three weeks of surveys, New World Warblers (*Parulidae*) were the most frequently documented bird-building collisions, but their numbers paled in comparison once New World Sparrows (*Passerellidae*) started moving through. Overall, 273 New World Sparrow collisions were documented this season, compared to 74 New World Warbler collisions. The third most frequently documented family this fall was Wrens (*Troglodytidae*), with 34 collisions recorded. Collectively, these three families represent 80% of all collisions documented in Dallas this fall ($n = 478$).

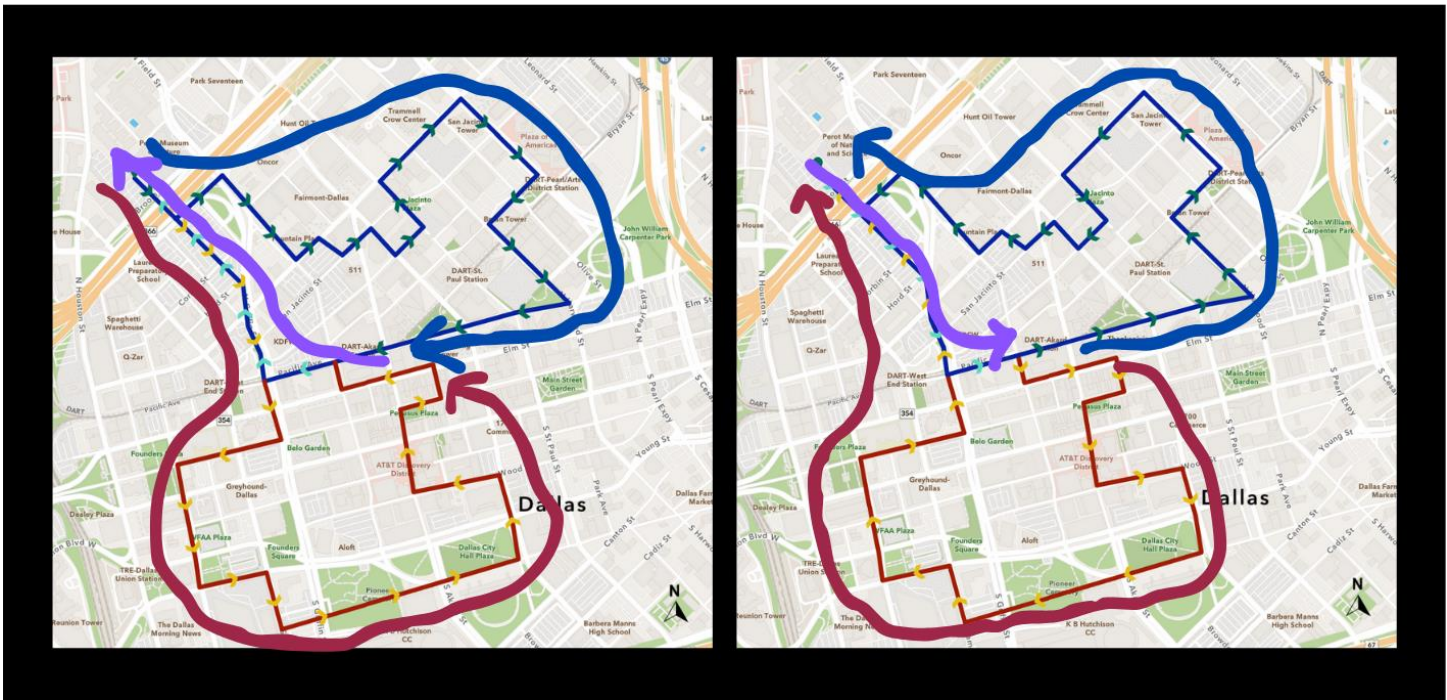
The graph below shows these changes in family abundance among survey results throughout the season. New World Warbler collisions occurred throughout the first nine weeks of surveys, with the greatest numbers in Weeks 1-4 and a small increase around Week 8 with the arrival of late migrant warblers. New World Sparrows first appeared in Week 2 and trended upward through Week 9, with a brief dip in Week 7. Wrens first appeared in Week 4, peaked in Week 5, then gradually dropped off over the next five weeks. Altogether, 13 species of New World Sparrows, 10 species of Warblers, and four species of Wrens were documented by Lights Out Dallas this season.



Reverse Survey Days Implemented

This fall, Lights Out Dallas implemented “reverse days” three days a week to determine if changing the survey direction would affect the number of bird-building collisions found. As seen in the maps below, volunteers walked the survey route in opposite directions on “reverse days” (*right*) and “forward days” (*left*).

Lights Out Dallas volunteers meet in the parking lot of the Perot Museum of Nature and Science on survey mornings. On “forward days”, as in past seasons, survey volunteers split off into two groups at the beginning of the survey, with each group covering roughly half of the route and meeting in the middle at Building 5 to walk back to the Perot Museum together. On “reverse days”, volunteers walk together to Building 5 and then split into two groups, with each group covering roughly half of the route and meeting back at the Perot Museum.



Lights Out Dallas survey route on forward (*left*) versus reverse (*right*) days. Purple arrows show when the team walks together, whereas red and blue show when the team splits up to cover different parts of the route.

Quantitatively, there was not a significant difference between the number of bird-building collisions found during surveys on forward versus reverse days this season. Anecdotally, though, we believe reverse days made a difference, particularly for some of the buildings along the northern half of the route. For example, on a reverse day, volunteers arrived at a building toward the end of the survey where a security guard pointed out two birds that collided with the building. The guard told volunteers that he saw one of the birds hit the window just minutes before the volunteers arrived. Had this happened on a forward day, at least one of those collisions would have happened after volunteers had already surveyed around this building.

Due to this incident and the fact that walking the route in reverse makes a difference in whether janitorial crews have already picked up any dead birds when survey volunteers arrive, Lights Out Dallas will continue to implement forward and reverse survey days in 2024.

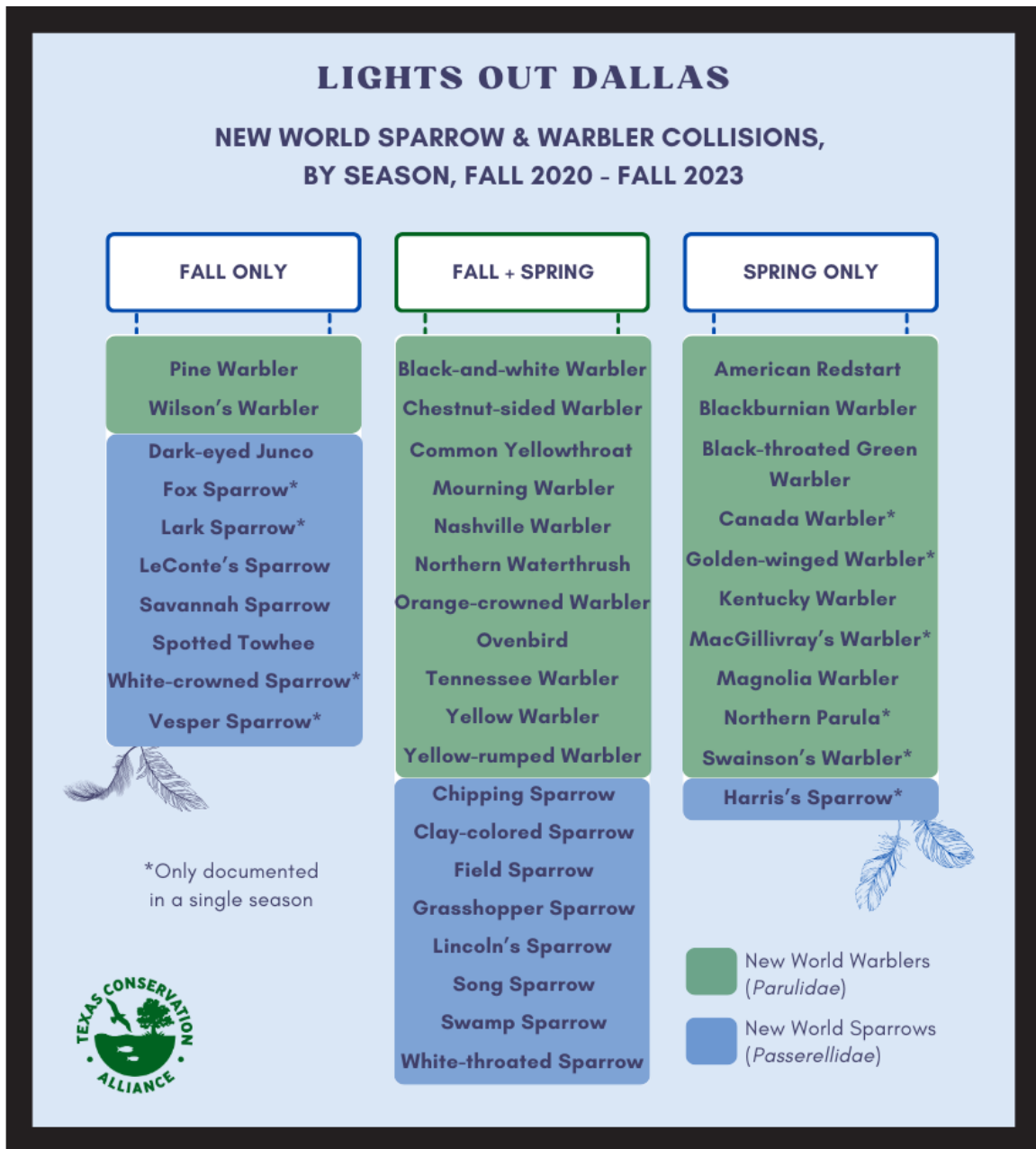
Different Species in Fall versus Spring

Over the past seven seasons of Lights Out Dallas, patterns have begun to emerge, one of which is differences in the bird species found in fall versus spring. Out of the 105 species documented as building collisions in Dallas, 51 species have only been documented in the fall ($n = 22$) or in the spring ($n = 29$), and 54 species have been documented in both migratory seasons. This pattern is most evident in New World Sparrows and Warblers, as illustrated in the graphic below.

Roughly the same number of warbler and sparrow species have been found during both migratory seasons. Conversely, sparrows dominate the list of species only found in fall, while warblers dominate the list of species only found in spring. These differences between seasons are likely due to differences in migratory paths in fall versus spring, plus a greater number of immature birds on their first migration in fall as opposed to spring.

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NEW WORLD SPARROW & WARBLER COLLISIONS, BY SEASON, FALL 2020 - FALL 2023



Together, We Achieve More

We extend our heartfelt gratitude to the exceptional partners who lent their invaluable support to Lights Out Dallas this year! These esteemed collaborators form the bedrock of our collective organization, helping us foster meaningful connections among individuals who share a common vision for advocating and sharing our message with their extended networks. Our connections and collaborative nature are stronger than ever, and we are already working together with our partners for an even more impactful year in 2024. Their steadfast support has been instrumental in ensuring the success of our initiatives, reflecting the power of collaboration in effecting transformative change. Together, we are making strides towards a safer journey for our feathered friends, and a culture of support and action within the community.



“We are at a unique stage in our history. Never before have we had such an awareness of what we are doing to the planet, and never before have we had the power to do something about that.”

-David Attenborough

References:

- ¹ Cornell Lab of Ornithology. 2019. All About Birds. Cornell Lab of Ornithology, Ithaca, New York. https://www.allaboutbirds.org/guide/Grasshopper_Sparrow/lifehistory
- ² Texas Parks & Wildlife. 2020. Species of Greatest Conservation Need. Texas Parks & Wildlife Department, Austin, Texas. https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/nongame/tcap/sgcn.phtml
- ³ Loss, S. R., T. Will, S. S. Loss, and P. P. Marra (2014). Bird-building Collisions in the United States: Estimates of Annual Mortality and Species Vulnerability. The Condor 116:8-23. <https://doi.org/10.1650/CONDOR-13-090.1>