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LIGHTS OUT DALLAS
Spring 2023 Survey Highlights and Observations

Jimena Vivanco, Lights Out Dallas Coordinator
Heather Bullock, Lights Out Dallas Assistant Coordinator

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The Lights Out Spring 2023 survey season came to an end on May 31, 2023. The 80-day effort could not have been achieved without the endless commitment of every individual and organization involved. This campaign has encouraged thousands of Texans to take action and create a safer passage for birds. The survey data also provides valuable information for scientists to study migration and window collisions.

Spring 2023 is our 6th season documenting window collisions in Downtown Dallas. A total of **298** records were documented this season, which includes **253** mortalities, **25** rescued birds, and **20** stunned birds that hit windows and flew away.

Lights Out Dallas
Downtown Dallas Bird Collision Survey Results

	Surveys Completed	Mortalities Collected	Rescues Conducted	Species Documented	Volunteers Engaged	Volunteer Hours Served	Miles Surveyed	Buildings Pledging Action	*Lights Out for Wildlife* Certifications Secured
Spring 2023	**80**	**253**	**25**	**48**	**58**	**681**	**572**	**13**	**48**
Fall 2022	80	322	28	51	82	751	597	143	49
Spring 2022	80	296	28	54	74	882	593	32	213
Fall 2021	78	397	37	56	30	555	658	30	82
Spring 2021	57	229	17	52	37	657	439	23	145
Fall 2020	80	457	21	53	30	529	682	13	-
Total	**455**	**1955**	**156**	**102**	**-**	**4055**	**3541**	**-**	**537**

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Volunteer Survey Leader Appreciation

Lights Out Dallas Leaders committed one or more mornings each week to facilitate the morning surveys. These volunteers consistently go the extra mile by welcoming new volunteers and navigating groups around the downtown Dallas area. Thank you to the volunteers for their commitment to this project.

Many of the Volunteer Leads represent partner organizations in Dallas making our efforts possible. Thank you to the Dallas Zoo, Perot Museum, and Trinity River Audubon Center for your collaboration, support, and wonderful representation through our leaders and volunteers.

Top Row: Sam R., Ashley G., Katie E, Tim B.; Middle Row: Alfonso G., Carson N.; Bottom Row: Sierra C., Gary B., Jake P., Marcus C., Jim S.

Spring 2023 Highlights

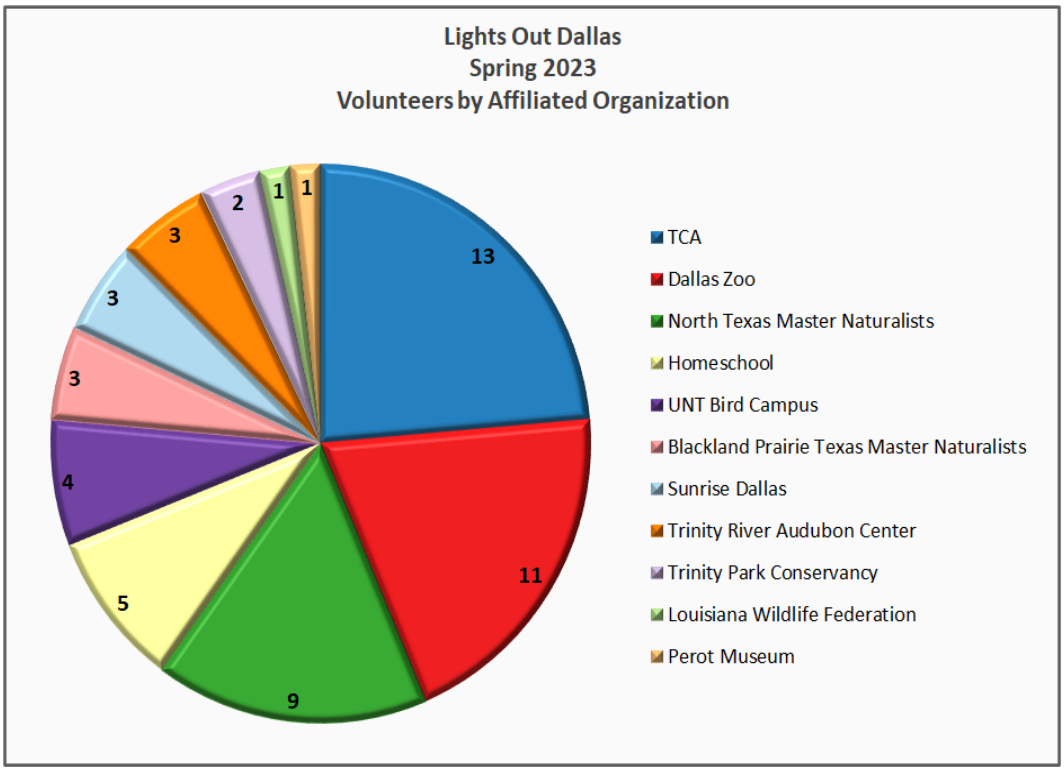
Seven New Species Documented

Seven new species were documented during surveys this spring, bringing the total species count for Lights Out Dallas bird-building collisions to 102. Representing four different families, the species are: Downy Woodpecker (*Dryobates pubescens*), Traill's Flycatcher (Alder/Willow Flycatcher, *Empidonax alnorum/traillii*), Eastern Phoebe (*Sayornis phoebe*), Harris's Sparrow (*Zonotrichia querula*), Black-throated Green Warbler (*Setophaga virens*), and Canada Warbler (*Cardellina canadensis*). Alder Flycatchers and Willow Flycatchers are nearly indistinguishable except by voice; hopefully, the experts at the Texas A&M BRTC lab will be able to confirm whether our impression of Alder Flycatcher is correct! While the woodpecker, flycatchers, and warblers were found dead, the Harris's Sparrow was found alive and taken to rehab to be cared for and hopefully released!

Top: Traill's Flycatcher (Alder/Willow Flycatcher), Canada Warbler, Yellow-bellied Flycatcher
Middle: Downy Woodpecker
Bottom: Black-throated Green Warbler, Harris's Sparrow, Eastern Phoebe
Photo Credits: Tim Brys, Heather Bullock, Alfonso Garcia, & Madison Rutherford

Increased Community Engagement

Our volunteers represent at least 10 different entities and come from all over the metroplex! This season, we even had an out-of-state visitor from Louisiana dedicate part of their visit to our efforts. Special thanks to Texas Master Naturalists, who represent a significant proportion of our volunteers! Spring 2023's list of groups has helped uplift grassroots Citizen Science projects and Urban Conservation efforts. Thank you for proudly representing these affiliations!



Increased Community Outreach

Lights Out Dallas increased our community outreach this spring by participating as exhibitors at events with audiences of varied ages and walks of life. Through our participation in Homeschool Day at the Dallas Zoo, the Birds of a Feather Flower Show from the Founders Garden Club of Dallas, and World Migratory Bird Day at Trinity River Audubon Center, hundreds of children and adults alike learned about the dangers that light pollution creates for migratory wildlife and how they can help reduce these dangers!

Survey Observations

Species Prevalence Similar to Spring '21 & '22

Species prevalence this spring was similar to the past two springs, as seen in the graph below showing the top collision fatalities by species. White-winged Doves (*Zenaida asiatica*) and Ovenbirds (*Seiurus aurocapilla*) remained the most frequently found fatalities. After being absent from Spring 2022 surveys, Cedar Waxwings (*Bombycilla cedorum*) appeared again in numbers similar to Spring 2021. Lincoln's Sparrows (*Melospiza lincolnii*) remained the most prevalent New World Sparrow fatality, and Common Yellowthroats (*Geothlypis philadelphia*) remained the second-most prevalent Warbler (after Ovenbirds).

One difference seen this year is the number of American Redstart (*Setophaga ruticilla*) fatalities – five compared to only one in each of the past two springs. Interestingly, all of the Redstarts this spring were female and were found during the last two weeks of surveys. As with many songbirds, male redstarts typically arrive at their breeding grounds 7-10 days prior to females to

establish their breeding territories[1], so it makes sense that the late migrants we found were all female.

LIGHTS OUT DALLAS

Top Spring Mortalities by Species

Species Common Name	Spring 2023 (80 Surveys)	Spring 2022 (80 Surveys)	Spring 2021 (57 Surveys)
White-winged Dove	42	30	31
Ovenbird	32	39	26
Cedar Waxwing	26	0	27
Lincoln's Sparrow	17	30	13
Common Yellowthroat	13	27	13
Grasshopper Sparrow	10	7	8
White-throated Sparrow	8	25	6
Mourning Warbler	6	7	5
Great-tailed Grackle	5	3	5
American Redstart	5	1	1

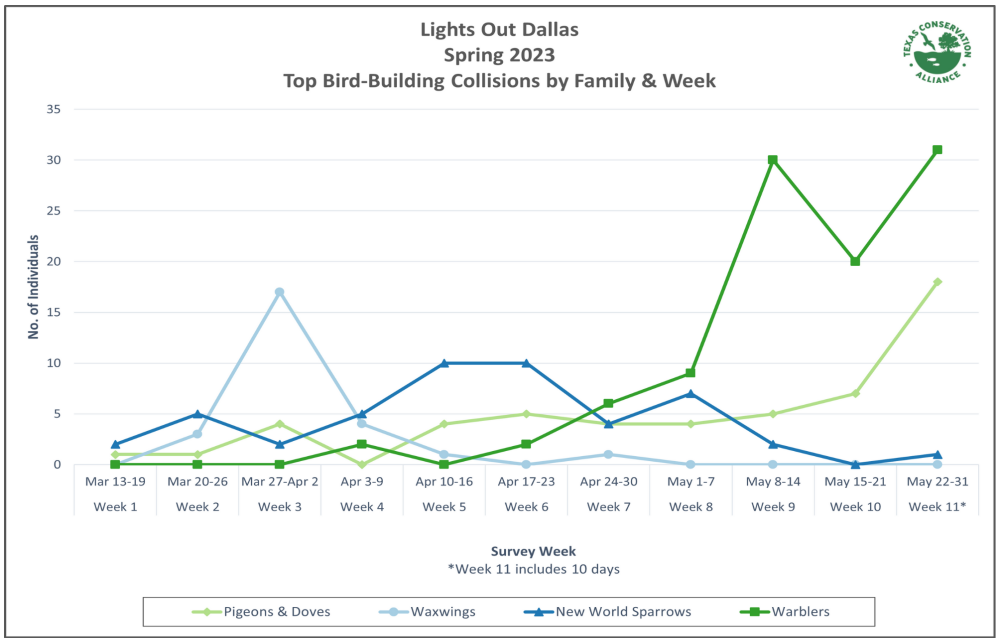
Composition of Survey Results Changes Throughout Season

New World Warblers (*Parulidae*) were the most frequently recorded bird-building collisions this spring (n = 100), first appearing in Week 4 and trending upward through Week 11, with a spike in Week 9. Pigeons and Doves (*Columbidae*) ranked second (n = 53), slowly trending upward throughout Weeks 1-10, then spiking in Week 11. New World Sparrows (*Passerellidae*) ranked third (n = 48), trending upward over Weeks 1-4, peaking during Weeks 5 and 6, then decreasing through Week 11. Waxwings (*Bombycillidae*) were the fourth most prevalent family, appearing in Week 2, spiking in Week 3 with a mass collision, and disappearing by Week 8.

The graph below depicts these changes in survey composition throughout the season. These four families represent 76% of all bird-building collisions recorded this spring (n = 298), with Warblers alone constituting 34% of all collisions. Furthermore, New World Sparrows and Warblers together represented an average of 48% of collision totals each week throughout the season and represent 50% of collisions overall.

Similar trends were seen in Spring 2021 and 2022, with New World Sparrows constituting the majority of collisions during the first half of the season and Warblers constituting the majority during the second half of the season. Similar trends were also seen in Pigeons & Doves in past springs, with collisions increasing during the second half of May. We speculate this is

due to the increased number of young, inexperienced birds being recruited into the local population as resident birds produce young in spring.



Why Waxwings? Lights Out Dallas Records Its Largest Mass Mortality To Date

Lights Out Dallas experienced its largest mass mortality event to date this spring, with 16 Cedar Waxwings found dead at one building. Cedar Waxwings are gregarious birds known to travel in large flocks in search of food[2]. This habit, paired with their attraction to fruit- and seed-bearing trees, puts them at high risk of colliding with man-made structures, particularly buildings with such trees reflected in mirrored glass windows[3,4]. Along the face of the building where the waxwings were found is a line of Bald Cypress trees (*Taxodium distichum*). We speculate that the waxwings may have been drawn to these trees, which would have provided food and a resting place, and mistakenly collided with the mirrored glass reflecting the trees. We encourage homeowners and building managers alike to carefully consider any potential dangers that landscaping near windows may pose to wildlife and choose to incorporate bird-friendly designs to reduce bird-building collisions.

More Ovenbird Collisions in Spring Than in Fall

Over the past three years, Ovenbirds have been the most frequently recorded warbler collision during spring surveys, constituting 11-13% of all collision mortalities. Conversely, Ovenbirds only represent 1-2% of collision mortalities from the past two falls. Since Ovenbirds are commonly reported as one of the top mortalities at collision monitoring sites across North America[5], we wondered why we find so few Ovenbirds in Dallas during fall migration compared to spring. Using the Audubon Migration Explorer, we found that while low levels of Ovenbirds occur in Dallas from mid-April through the end of May as they head north to their breeding grounds, most Ovenbirds skirt around DFW while heading south in the fall. This difference in migration paths from one season to the next explains why we find ten times as many Ovenbird collisions in spring compared to fall.

We hope the observations help support future studies and raise awareness of light pollution and its impact on migratory birds.

Collaboration is key to conservation. Thank you to every volunteer that came out this season and helped rescue injured birds and collect specimens for future research. Special thanks to all the partners, whose support on the ground and behind the scenes helps make Lights Out Dallas a success: Perot Museum of Nature & Science, Dallas Zoo, Trinity River Audubon Center, Audubon Texas, Texas A&M College Station's Biodiversity Research & Teaching Collections Lab, and Cornell Lab of Ornithology. This work would not be possible without the commitment from all the partners.

This quote truly reflects the heart of the Lights Out, Texas campaign:
"*Birds were flying from continent to continent long before we were. They reached the coldest*

place on Earth, Antarctica, long before we did. They can survive in the hottest of deserts. Some can remain on the wing for years at a time. They can girdle the globe. Now, we have taken over the earth and the sea and the sky, but with skill and care and knowledge, we can ensure that there is still a place on Earth for birds in all their beauty and variety – if we want to... And surely, we should." – **David Attenborough**

Special Thanks

Kathy Rogers and the Rogers Wildlife Rehabilitation Center (RWRC) have been committed partners with Lights Out Dallas since the conception of our efforts with any stunned birds we have found on our walks. We dedicate this season to Kathy Rogers, who passed away peacefully on April 9, 2023.

Kathy's obituary tells how she founded The Rogers Wildlife Rehabilitation Center (RWRC) in 1989 at Samuel Farm in Mesquite, TX, and devotedly built it into the largest not-for-profit all-species avian rehabilitation and education center in North Texas. Since its inception, RWRC has accepted, rehabilitated, and released many thousands of critters back into the wild. RWRC now only focuses on taking wounded or abandoned birds of any kind, but historically it has helped anything with fins, fur, feathers, or scales. We plan on continuing our collaboration with RWRC, now under the care of the new Executive Director – Mark Branning. Mark worked hand in hand with Kathy for many years and is a core member of their team. We are excited about their ongoing support for the Lights Out Dallas Project!

References:

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