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Spencer Smith
Utah State University

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Survey of Bird/Window Collisions at Utah State University-Brigham City

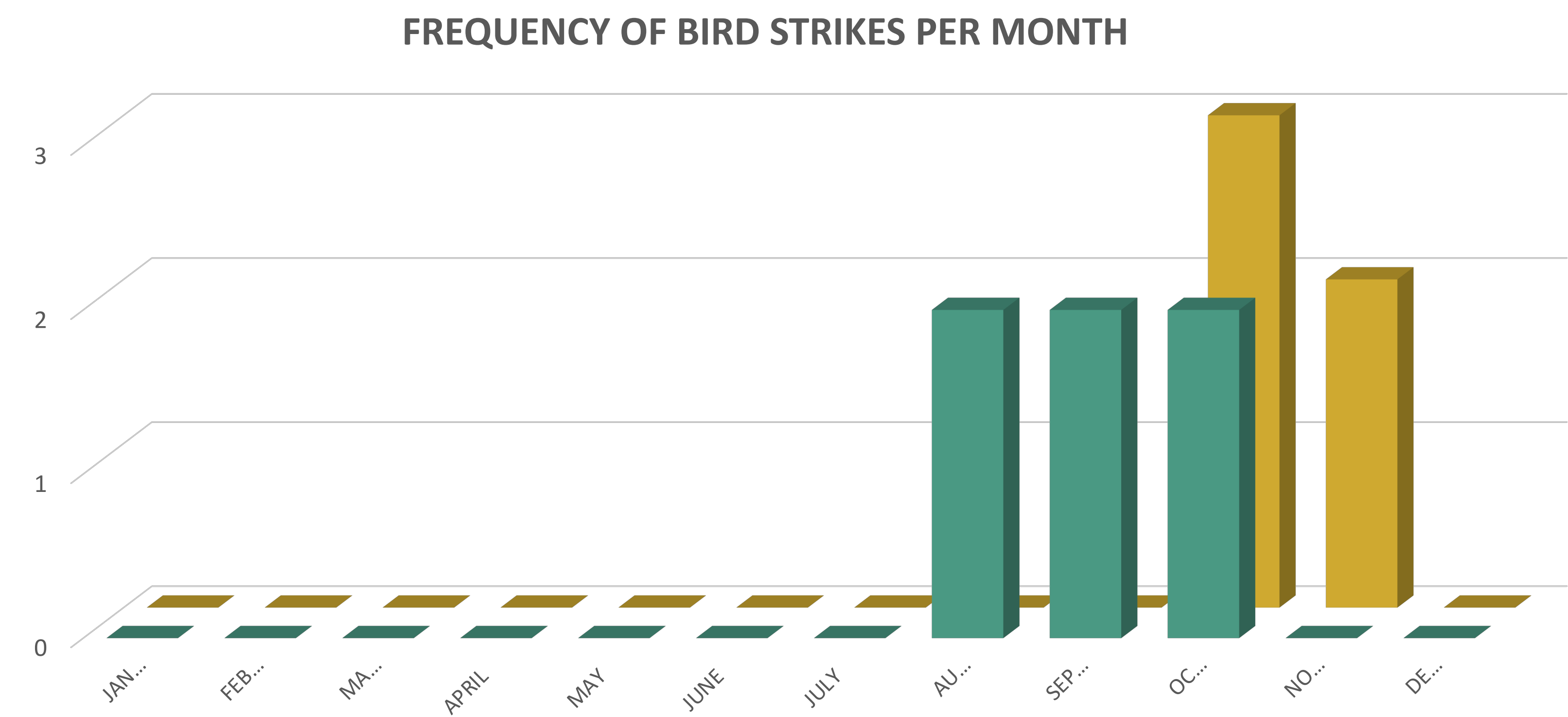
Spencer Smith
Utah State University

Dr. Jessica Habashi
Utah State University

Introduction

When birds fly at full speed into the highly reflective glass windows of human structures, death is often the outcome. This research investigates the impact of architecture on bird population through a specific case study. Bird/window collisions claim from around 350 million to over 1 billion birds per year (Kahle, Flannery, & Dumbacher, 2016). Studies have shown that window surface area (Borden, Lockhart, Jones, & Lyons, 2011) can increase incidents of bird-window collisions. In 2015, Utah State University – Brigham City campus finished their new Classroom and Student Services building which features large windows and an interior tree that can be seen from outside. In 2017, we were prompted to start investigating what impact our new building was having on the local bird population.

We hypothesized that our building has a significant negative impact because many of the previously-researched factors correlating to high bird deaths are present.



Methods

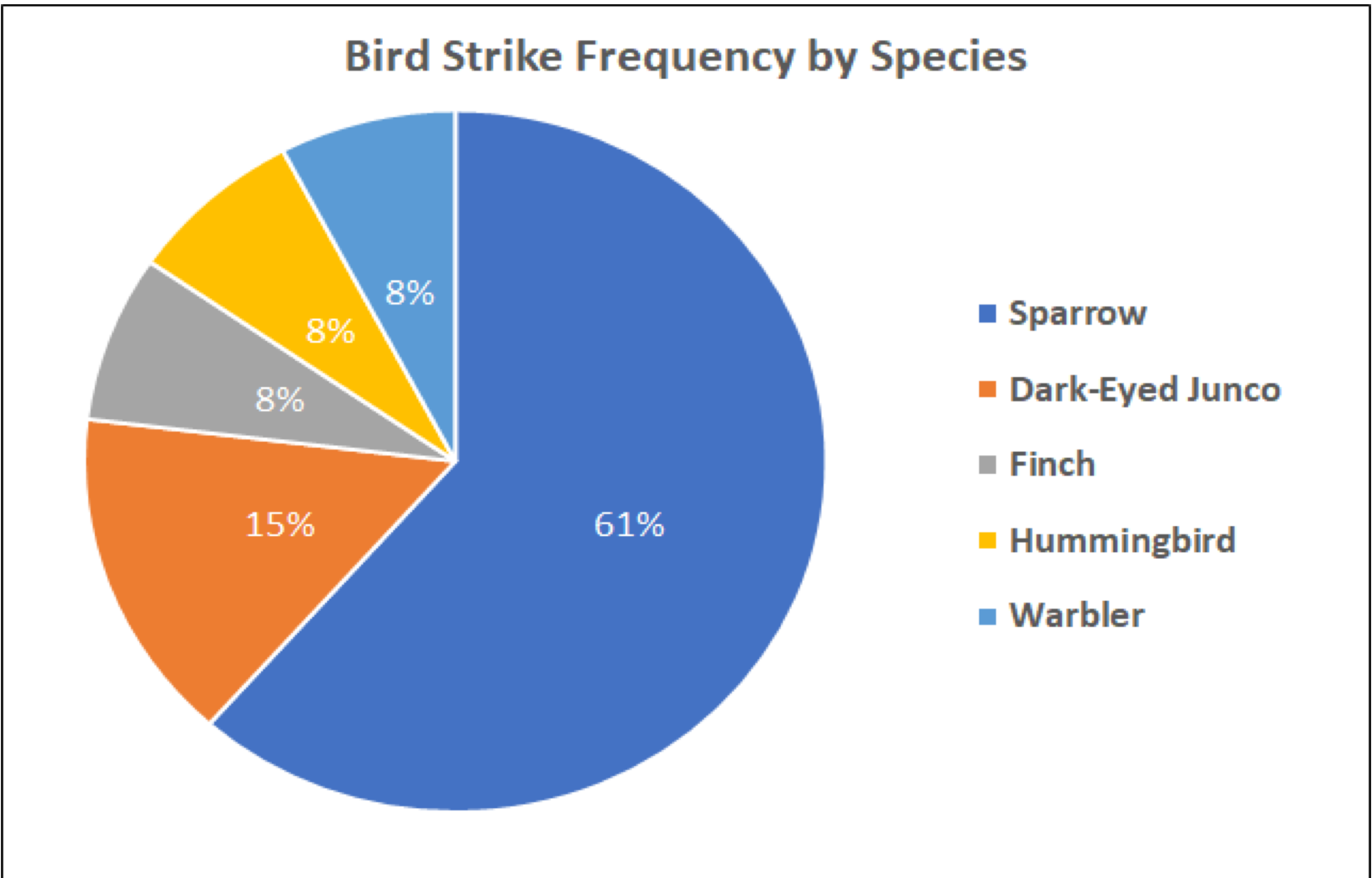
Beginning in Fall of 2017, at least three times a week, a trained individual would walk the perimeter of the CS&S building looking for evidence of bird strikes on the building.

- Evidence:** Bird carcasses, numerous feathers, smudges or smears on windows.
- Boundary:** Any evidence within 6 feet of the building, up to the eave.
- Recording:** Physical evidence was collected and stored. Data was stored in a spreadsheet.

USU-Brigham City CS&S Building



The USU-Brigham City CS&S building as viewed from the west.



The predominant areas where bird strikes were found were on the East and West sides of the building, where the window surface area is the largest.

Results

Over the course of a year, 100 surveys were done with 13 birds found. All birds were found in the fall between August and November.

Of the 13 birds found, a majority were house sparrows (n=8) followed by Dark-eyed Juncos (n=2), the remaining species found were House Finch (n=1), Broad-billed Hummingbird (n=1), and a Wilson’s Warbler (n=1).

The majority of the fatal impacts have been on the East and West sides of the buildings.

Conclusion

The most common species affected is the House Sparrow (*Passer domesticus*). This could be because House Sparrows (*Passer domesticus*) are a common bird found in the area, particularly in the spring and fall (Bear River Migratory Bird Refuge, 2006), but it does present us an opportunity to ask more questions and determine whether there are other factors present which contribute to a higher rate of collision for these birds over others. The results will be presented to the USU Brigham City administrators along with possible mitigation solutions.

