

Investigating Bird Collisions with Buildings on the WUSTL Campus

Introduction

As humans continue to develop and repurpose the natural world, it is our duty to aid the survival of species whose habitats we have degraded. This includes birds, which in North America have seen their numbers decline by 3 billion since 1970. Birds are vital to many ecosystems and contribute many ecosystem services, including pest control and seed dispersal. However, many bird populations are in drastic decline due to widespread habitat loss -- deforestation has eliminated a great percentage of bird habitats.

But further, the buildings we construct in our cities and towns can harm birds too; in the US, up to 1 billion birds die each year from window strikes. These occur because it is difficult for birds to identify transparent windows as they fly.

Bird strikes are especially prevalent in St. Louis -- the city lies in the middle of the Mississippi Flyway, a path that many birds take during their migration seasons.

As a part of this semester-based initiative, which began in fall of 2019 and is proud to partner with the St. Louis Zoo, we had three main objectives for this semester:

Objectives

- 1 Investigate whether bird collisions are occurring on campus.
- 2 Promote collection of data through awareness campaign.
- 3 Produce manual for ease of data collection by future groups.

Data Collection

Photograph bird and building it collided with.

Upload finding to iNaturalist.

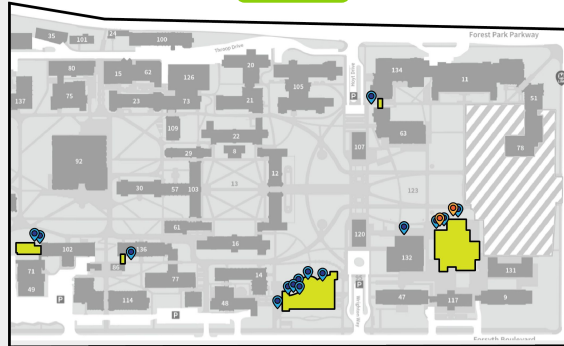


Walk campus and note any collisions.

Record weather conditions.

Upload finding to WashU Bird Collisions website.

Data



Regions Surveyed

Fall 2019 Migration Collisions

Spring 2020 Migration Collisions

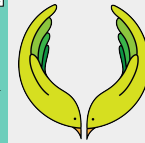
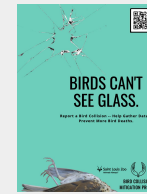


Date	Species	Building
9/4/19	Ruby-throated Hummingbird	Welcome Center
9/17/19	Sparrow	Hillman
9/18/19	Northern Waterthrush	Wilson
9/20/19	Ruby-throated Hummingbird	Hillman
9/20/19	Ruby-throated Hummingbird	Hillman
9/20/19	Ruby-throated Hummingbird	Hillman
9/20/19	Ruby-throated Hummingbird	Hillman
9/23/19	Common Yellowthroat	Hillman
9/24/19	Cardinal	Rebstock
9/24/19	N/A	Brown School
9/30/19	Pigeons	Jubel
10/1/19	Hummingbirds	Rebstock
10/1/19	Swamp Sparrow	Kemper Museum
10/7/19	Swamp Sparrow	Kemper Museum
10/8/19	Swamp Sparrow	Hillman
10/9/19	Yellow-Bellied Sapsucker	Bryan Hall
10/16/19	Swamp Sparrow	Kemper Museum
10/18/19	Lincoln Sparrow	Hillman
10/23/19	Savannah Sparrow	Weil
10/23/19	American Robin	Brown School
10/24/19	Swamp Sparrow	Hillman
10/26/19	Swallow	Weil
10/29/19	Song Sparrow	Welcome Center
10/30/19	Swamp Sparrow	Hillman
10/31/19	Ovenbird	Eads
10/31/19	White-throated Sparrow	Eads
11/8/19	Song Sparrow	Jubel
3/3/20	Perching Bird	Kemper Museum
3/3/20	Perching Bird	Kemper Museum

Lack of bird collisions observed during campus shutdown of spring 2020 suggests shades and blinds may decrease reflectivity and decrease bird strikes.

Awareness Campaign

- **Website:** A platform for reporting strikes and raising awareness.
- **Email:** Funnels strike reports and observations from website.
- **Flyers & Posters:** Inform and spread awareness around campus.
- **Logo:** Redesigned to reflect a more positive message.
- **Underpass Painting:** Mural painted with awareness message.
- **Newsletters:** Flyers posted on departmental newsletters.



Conclusion

- Bird collisions are occurring at specific locations near the East End.
- Data collection and the awareness campaign were unable to be completed.
- A comprehensive manual for next semester's group details information needed to complete this project.

Future Directions

- Engage student body through awareness campaign.
- Identify potentially problematic areas on campus for bird strikes.
- Urge WashU to add collision-prevention striping or spots to problem buildings.
- Make bird collision program self-sustaining and an important, well-known project at WashU.
- Whether closing blinds reduces bird strikes, as suggested by spring data, should be further studied as a potential mitigation tactic.

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