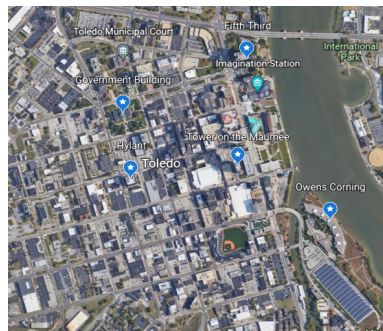
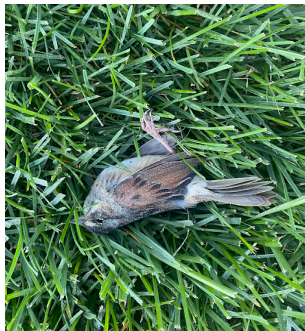


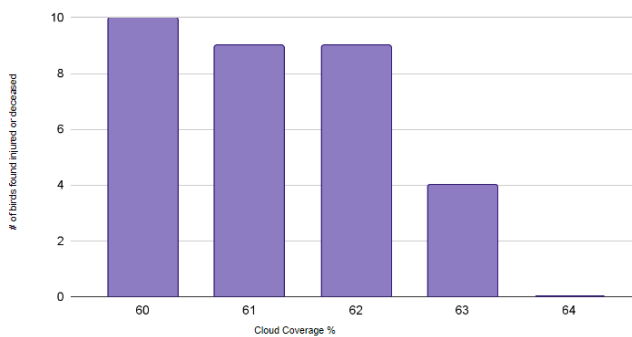
Bird Collisions involving Urban Architecture
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How does cloud coverage in urban architectural settings affect bird collisions? Birds are being injured and killed everyday from collisions with urban architecture because of the sun when cloud coverage percentages are low.



Affect of cloud coverage on the number of bird collisions.



Introduction

How does weather and cloud coverage affect bird collisions in urban architectural settings? 1.3 billion birds are affected from running into man made structures annually (Urban Bird Foundation, 2022). This research is relevant because it can help contribute towards enforced regulations of things such as reflective glass. Whether it's cars or buildings, bird collisions don't only affect birds but humans as well. Birds help our ecosystem flourish by helping spread seeds and by keeping bug populations under control. It's our responsibility as the main cause of these collisions to take action. One way to help is to avoid reflective windows. Over 50% of bird collisions happen with homes, so everyone has a part to play in helping our resident and

migratory bird populations. Dots, tape, one way films and zen curtains are only a few things you can do to prevent future bird collisions at your home (J.Duez, Personal Communication, November, 28, 2022)

Hypothesis

Urban architecture will negatively affect bird well-being and population (number of birds that have collided with glass or other parts of architecture) when there is a low cloud coverage percentage because of the sun.

Objective

Our objective is to bring awareness to what people would not normally consider when it comes to birds. Birds are having collisions with architecture when cloud coverage percentages are low because of reflective glass and much more.

Methods

Our objective is to bring awareness to what people would not normally consider when it comes to birds. Birds are having collisions with architecture when cloud coverage percentages are low because of reflective glass and much more.



Abstract

We believe urban architecture affects bird wellbeing. 1.3 billion birds are affected annually by man-made structures. Our objective is to bring awareness to the under-reported issue and what we can do to play a part in the reduction of these collisions. Our data was easily collected by just walking around Downtown Toledo with: our phones, weather apps, pencil, data sheets and bags to hold in affected birds that are found. We found that bird collisions happened more often when there was low cloud coverage and have learned it is because the sun then gets to come through and reflect brightly on these windows which blinds the birds. When birds were found we would address their well-being and if still alive, they would be taken to a nursery to be nursed back to health.

Results

We have found that the less clouds in the sky to block the sun, the more bird collisions there were. When the sun is reflecting off the buildings or is shining in the birds eyes, more birds are at risk of collisions with architecture.

Location	Time (AM)	Date	Species	Dead or Alive	Cloud Coverage %
9/3 south 5th 3rd	7:22	10/8	N/A	Dead	60%
Brick bar/PNC alley east	7:24	10/8	Yellow-Bellied C	Dead	60%
Shomaker south	7:44	10/8	Yellow-Bellied C	Dead	60%
Tower on the Maumee	8:52	10/8	Brown Creeper	Alive	60%
Tower on the Maumee	8:55	10/8	Warbler	Alive	60%
Parking Garage	8:57	10/8	Brown Creeper	Alive	60%
Owens Corning	8:17	10/8	Morning Dove	Dead	60%
Owens Corning	8:23	10/8	Swamp Sparrow	Alive	60%
Hilton Garden Inn	8:34	10/8	White-Throated	Alive	60%

Location	Time (AM)	Date	Species	Dead or Alive	Cloud Coverage %
East side Ottawa	8:18	10/7	Palm Warbler	Alive	63%
Eastside Ottawa Hotel	8:38	10/7	Black Poll Warbl	Dead	63%
Eastside PNC building	8:53	10/7	Yellow-Bellied W	Dead	63%
Hylant West Side	7:52	10/7	Nashville Warble	Dead	63%

Conclusion

In conclusion, there are many birds at risk of collisions with architecture when there are not many clouds in the sky. When cloud coverage percentage is low, the sun is more prominent which affects birds sight by either shining directly in their eyes or reflecting off of architecture or vehicles. When we went to Downtown Toledo, it was mainly cloudy and we found many birds that were affected by architectural collisions. On the day that the sun was out, we found less birds.

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