

DRAFT



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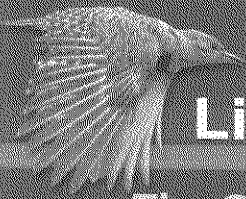


Ruby-throated Hummingbird

Collision Course

A look into the Fatal Light Awareness Program
and the Bird Collision Phenomenon





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The Solution: Rescue, Rehabilitation and Release

The Fatal Light Awareness Program (FLAP) is a non-profit charity that has partnered with the City to reduce migratory bird casualties.



During the spring and fall migration seasons, FLAP volunteers rescue injured birds that have collided with buildings in the Financial District.

They are quickly gathered so that they do not become prey for gulls and crows.

If they require medical attention, they are treated on-site or transported to the Toronto Wildlife Centre (TWC) for rehabilitation.

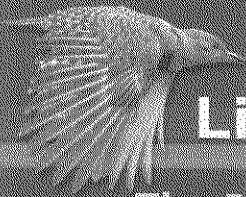
Rehabilitated and uninjured birds are released outside the city.

Dead birds are taken to the Royal Ontario Museum (ROM) where they are used for various research and educational purposes.



Cape May Warbler





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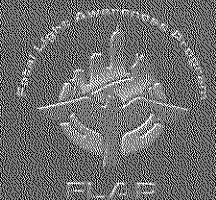
The Issue: Lights and Windows Kill Birds

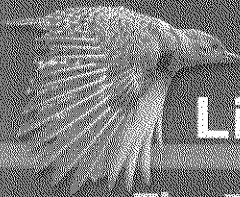


Red-headed Woodpecker

Urban lights disorient migratory birds. Many crash into buildings, often resulting in death.

Surviving birds become entrapped in the city. As day breaks they continue to collide with reflective windows or succumb to gulls and other predators.

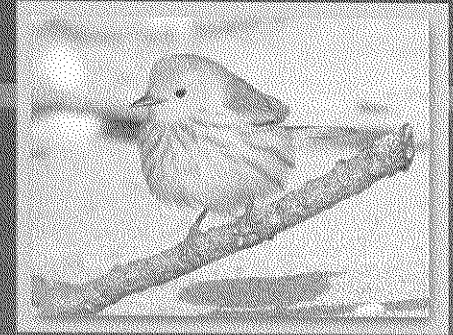




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The Issue: Collisions With Windows

Bird collisions with windows is now the leading cause of bird death across North America



Yellow Warbler



- **Commercial Buildings**

 - Lower cooling costs

 - Cost effective

 - Aesthetically pleasing

- **Residential Buildings**



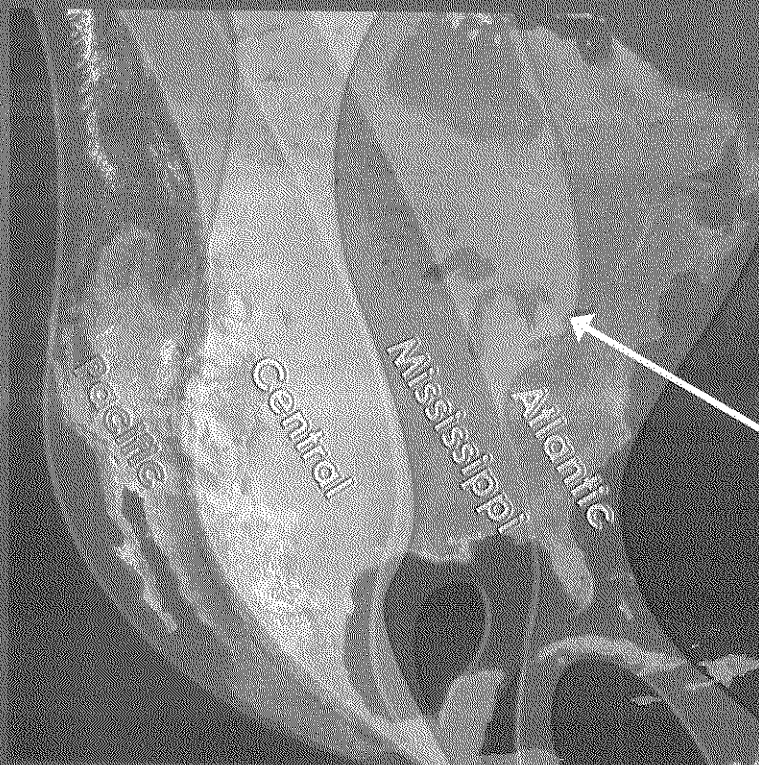


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The Issue: Bird Migration

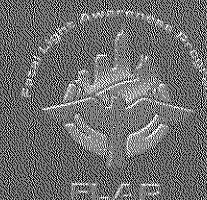


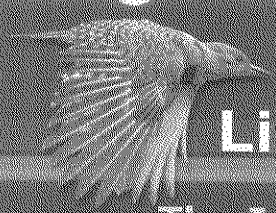
Orchard Oriole



Many urban areas across North America are situated along migratory bird routes.

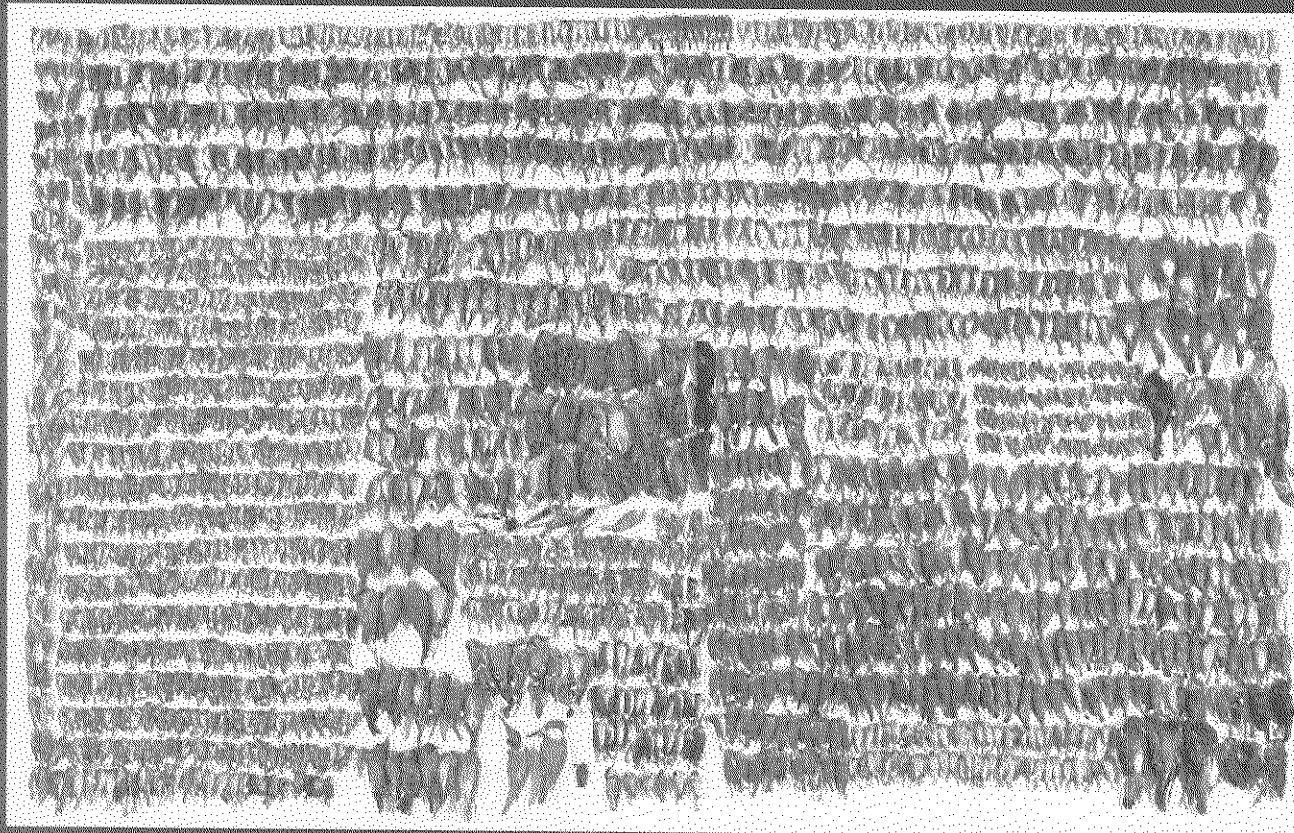
Markham sits beneath two major overlapping corridors making it one of the busiest migratory passages on the planet.





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The Issue: Lights and Windows Kill Birds



Up to 10 million birds collide with buildings across Toronto annually

**1993 – 2006 FLAP has recovered over 41,000 birds from 162 species,
64 species of which are considered threatened**





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The Issue: How Birds Benefit Us

Yellow-breasted Chat



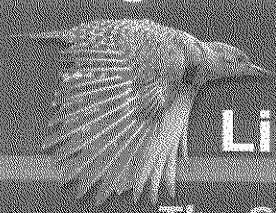
Threatened Species



White-throated Sparrow

Birds Benefit Us By:

- playing an integral link in the food chain
- helping regulate insect populations
- helping pollinate plants
- strengthening the North American economy
- contributing to a healthy urban environment



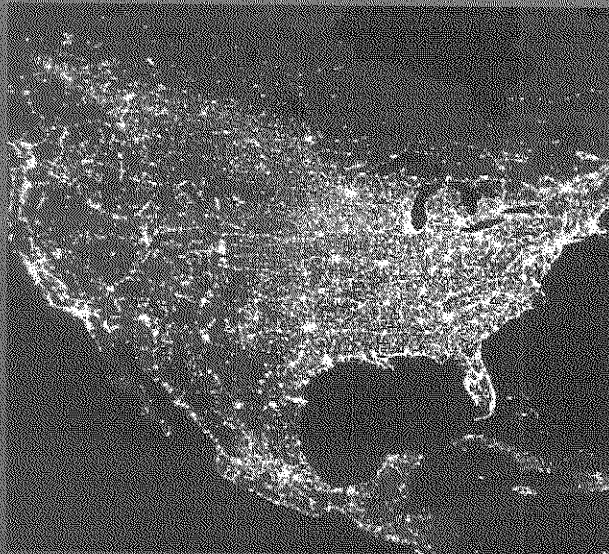
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The Solution: How Turning Off Lights Benefit Us



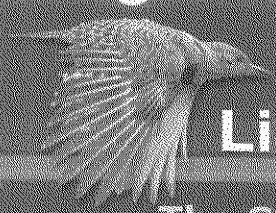
White-crowned Sparrow

Turning unnecessary lights out at night and applying window treatments during the day will yield many rewards:



- energy and cost savings
- reduced light pollution
- decreased greenhouse gas emissions
- a safer environment for birds, and
- a healthier environment for everyone





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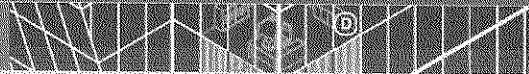
The Solution: Achievements



Common Yellowthroat

Bird-Friendly Development Guidelines

COMPREHENSIVE
BIRD-FRIENDLY SITE
STRATEGY



City of Toronto

Bird-Friendly Development Rating System and Acknowledgement Program

Companion document to the Bird-Friendly Development Guidelines



G. Bird-friendly site
ventilation grates

H. Use of lighting fixtures
effectively projecting light
downward



The Bird-Friendly Development Rating System and Acknowledgment Program





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The Solution: Dispel Bird Collision Deterrent Myths

Studies indicate these common techniques
do NOT prevent bird collisions.



King Fisher



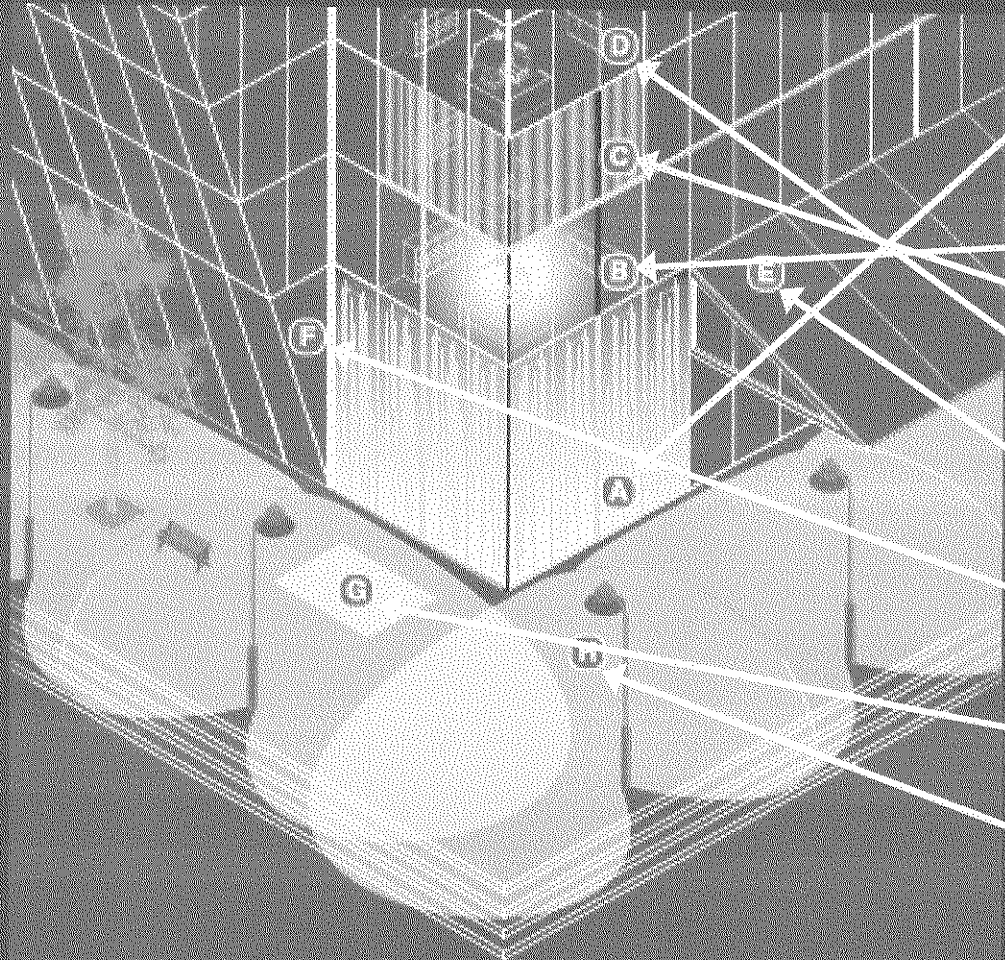
- **Plastic Owls**
- **Noise Makers:**
 - Bomford, Mary. 1990
 - Erickson, William. 1992
 - Dooling, R. 2002
- **Window Decals** -Klem, Dr. Daniel. 1989
- **Ultraviolet Light** -Klem, Dr. Daniel. 2005





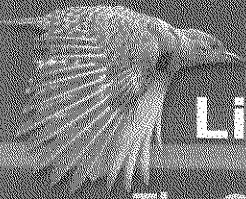
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The Solution: Comprehensive Bird-Friendly Site Strategy



- A: Treatment applied to glass projecting enough visual markers to make it visible to birds
- B: Task lighting in use after dark
- C: Blinds drawn after dark
- D: Lights turned off after work hours
- E: Awning for muting reflections on lobby windows
- F: Glass effectively angled to project reflections downward
- G: Bird-friendly site ventilation grates
- H: Use of lighting fixtures effectively projecting light downward





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The Solution: Visual Markers

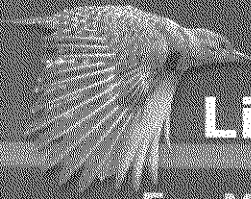


Song Sparrow



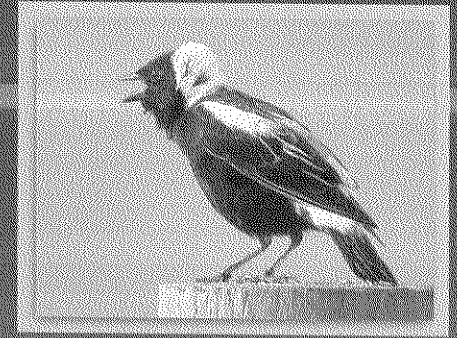
- **CollidEscape**
- **Decorative window treatments**





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For More information:



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