

FOR THE BIRDS

IS YOUR ENVIRONMENT FEATHER FRIENDLY?

BY CONVENIENCE GROUP

WHEN YOU CONSIDER THE MAJOR ISSUES affecting our environment, you probably think about climate change, energy conservation, overpopulation, pollution, resource depletion or even waste disposal.

After all, these represent the most reported, often studied and the most frequently discussed environmental concerns. Over the past decade there has been a groundswell of interest by government, industry and citizens in environmental issues. An often unnoticed, but equally serious environmental issue, is the extraordinary number of bird accidents with manmade structures. These collisions account for an estimated one billion deaths annually or over 10 per cent of the total bird population in North America.

In short, the greatest threat to birds, and all wildlife, continues to be the loss and/or degradation of habitat due to human development and disturbance. For migratory birds and other species that require multiple geographic areas for wintering, breeding, and stopover points, the effects of habitat loss are far-reaching. But even after nearly two decades of drawing attention to the problem, the threat to birds has still rarely been considered by architects or developers.

The Bird Migration Cycle

During the two annual migration periods, the bird population travels north in the spring (mid-March through June) to their summer breeding grounds, and south in the fall (mid-August through November) to warmer regions where they spend the winter. In the course of their biannual journey they sometimes get confused by the mix of light pollution and the effects of glass reflection in a continuously changing urban environment.

Daytime strikes occur because the birds cannot perceive glass as a solid object and are unable to distinguish the images reflected in glass from trees, sky or potted indoor plants. Certain species, such as Northern Cardinals

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and American Robins, who tend to be territorial and nest very close to buildings, may also attack their own reflection during breeding season, believing it to be a rival. The second type of potentially fatal collisions happen by night, when nocturnal migrants (including many of our most beloved songbirds such as orioles, song sparrows and warblers) hit lighted high-rise windows jutting into their airspace. Some of these nighttime collisions are due to simple random chance, when a building happens to be directly on a bird's flight path. Much more often, the birds are actively lured to their deaths by lights within these tall buildings.

The fourth largest city in North America, Toronto sits on one of the biggest migratory corridors on the planet, making it a prime killer of birds. Toronto's skyline began to take shape in the 1960s, creating a long wall of glass-attired structures along the shore of Lake Ontario. As it happens, that vista crosses several major migratory flight paths, and contains the initial large structures that the birds face coming south from the wilderness.

So many birds hit the glass towers of Canada's most populous city that volunteers patrol the ground in the financial district each morning carrying butterfly nets to rescue injured birds or to pick up the dead ones. The group behind the bird patrol, the Fatal Light Awareness Program, known as FLAP, estimates that up to nine million birds die every year from impact with buildings here. Michael Mesure, who founded the group 19 years ago, once recovered 500 dead birds in a single morning. Today, FLAP's volunteers number close to 60 (Mesure is one of three full-time staff.)

The Toronto Green Standard

A New York Times article in October 2012 titled *Casualties of Toronto's Urban Skies* estimated that more than a million birds die each year in the Toronto area as a result of building collisions.

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The Toronto Green Standard issued an update in 2010 in the Ecology Section detailing a new policy for “New Mid to High-Rise Residential and Industrial, Commercial and Institutional Development, Four Stories or Higher.” The standard adds three important requirements:

1. Treat glass with a density pattern or mute reflections between 10 and 28 centimetres apart for a minimum of the first 10 to 12 metres of a building above grade;
2. Where a green (living, with vegetation) roof is constructed that is adjacent to a glass surface, the glass must be treated to a height of at least 12 metres above the level of the roof;
3. Ensure that ground-level ventilation grates have a porosity of less than two by two centimetres



Residential Issues

Due to the significantly greater number of residential structures versus commercial buildings, bird collisions with residences actually take more of our feathered friends' lives. Many collisions of the residential variety do not appear to be fatal at first, often temporarily stunning a bird that flies off, seemingly recovered, in a few moments. But many times one of every two of these birds die later, from internal bleeding or hematomas.

You can take a few do-it-yourself preventative measures. Large picture windows or a pair of windows at right angles to each other on the corner of a house or other building are usually the worst culprits.

1. Cover the glass on the outside with window screening or netting at least two to three inches from the glass, taut enough to bounce birds off before they can hit the glass;
2. Cover the glass with a one-way transparent film that permits people on the inside to see out, but makes the window appear opaque on the outside. You can find information about the best available products on the FLAP website (<http://www.flap.org>);
3. Place a wooden grille or vertical tape strips on the outside of the glass, set not more than 10 centimetres apart, or mark the glass with soap or permanent paint in the same way;
4. A do-it-yourself kit is also available from Feather Friendly (<http://www.featherfriendly.com>). The kit contains visible markers which are applied to windows and utilize the same technology used in commercial buildings.

Golf Clubs and Recreations/Leisure Facilities Issues

Golf clubs or leisure facilities are clearly at risk. The more expanses of green lawn and trees that combine with a large array of windows, the more you have probably experienced the problem. A few steps to try include:

1. Keep the slats only half open on interior vertical blinds;
2. Bright windows on the opposite wall from your picture window may give the illusion of an open path to the other side. Closing a window shade or a door between rooms can sometimes solve this situation;

3. Use task lighting after work hours or light fixture that project light downward;
4. On new construction or when putting in new windows, consider double-hung windows, which have the screen on the outside of the glass;
5. Apply a window film solution to existing reflective glass that consists of the application of various patterns of visual markers of a specific size, colour, and spacing to the exterior glass surface to provide the necessary visual signals for birds to avoid impact. The solution provides in excess of 98 per cent clear viewing by building occupants and is ideal for new construction and retrofits on existing buildings.

An example of one such problem at a club occurred right in the heart of Toronto at the ivy-covered Georgian revival-style building that is home to the Faculty Club situated at 41 Wilcox Street. Faculty Club General Manager Leanne Pepper recounted the club's long history when, as part of the 1960s downtown development, the University of Toronto purchased a magnificent building that originally housed the Primrose Club that had served as a meeting place for the Cosmopolitan Society, a Jewish business and professional men's private club founded in 1907.

Pepper advised: "The problems for the Faculty Club began when a retractable patio awning was replaced by a glass enclosure used for member lunches. When migrating birds began crashing into the new structure and dropping to the ground in full view of distraught dining onlookers, I reached out to a friend, Melissa McDonald, who I knew was involved in rescuing birds with an organization called FLAP. Michael Mesure, FLAP President, put us in touch with Convenience Group who, he was confident, could provide the solution we needed. After talking to Convenience Group about a 3M window film treatment option called Feather Friendly, I was initially concerned about putting a film with markings on our windows but the solution proved to

“After years of trial and error, the Convenience Group seems to have cornered the suddenly exploding market for retrofitting buildings with their Feather Friendly window film.”

be very effective and aesthetically pleasing at the same time – it just fades away and you don't notice it.” Pepper added that a lot of golf and country clubs that experience the problem just aren't aware there is a real solution to remove the threat of bird casualties without really altering the outward appearance.

Larger Commercial Structure Issues

The City of Markham also experienced a serious problem with bird deaths with the relocation of their municipal building to a newly-constructed atrium style structure at 8100 Warden Avenue. It is hard to envision a building more deadly to birds: Highly reflective glass and transparent windows next to a tranquility garden with trees and water. Initially, the city attempted to counteract the problem by removing trees and shrubs that enhanced the environment inside the structure. Silhouette stickers applied to the windows to act as a deterrent also produced very limited success. Finally, a specialized film was applied. Even while the film was being installed, the birds continued to strike the windows that had not been treated. Since the completion of the patterned glass film treatment there have been no reported collisions. After years of trial and error, the Convenience Group seems to have cornered the suddenly exploding market for retrofitting buildings with their Feather Friendly window film. The film contains the small white markers that now also cover the windows at Consilium Place in Scarborough.

Conclusion

An estimated 300 million to one billion birds die each year from collisions with glass on buildings, from skyscrapers to homes. Birds simply can't tell reflection from reality. Nearly 300 species have been reported as collision victims, including hummingbirds, kingfishers, woodpeckers, woodcock and birds of prey. The solution clearly lies in integrating bird-safe design elements into new architecture for commercial buildings, leisure facilities and homes. Existing buildings need to be

retrofitted with solutions such as applying tape, film, paint, or decals to their exterior to create visual barriers; installing netting in front of the glass or using shutters; and modifying interior and exterior lighting schemes.

There are a number of knowledgeable resources that provide education and advice on dealing with the problem of bird strikes. They include: Fatal Light Awareness Program (FLAP) at www.flap.org,

Feather Friendly at <http://www.featherfriendly.org/feather-friendly-research-education.php>

Nature Canada at www.naturecanada.ca/bird, the North American Bird Conservation Initiative (NABCI) at <http://www.nabci.net/Canada>, the Canadian Wildlife Service at

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<http://www.fishwildlife.org> and the American Bird Conservancy at <http://www.abcbirds.org/abcprograms/policy/collisions/glass.html>

Migratory birds are some of nature's most magnificent resources. Their conservation is a critical and challenging endeavor and one in which we all should participate.

About Convenience Group

Convenience Group has been making a difference in the Greater Toronto Area for more than 35 years as a certified 3M window film dealer and exclusive distributor of Feather Friendly bird deterrent systems. For more information visit <http://www.conveniencegroup.com> or contact Geoff Matheson, Vice President of Sales at 1-888-835-5885 to schedule a free commercial or residential consultation.

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