

# City lights

Disoriented by glare and reflective surfaces, millions of birds crash into office buildings every year. Now, conservationists and city planners are teaming up to create a safer urban environment for avian travellers.

By Brian Banks

Tricked by glass reflections, more bird collisions occur in the daytime than at night. Residents can use shades and screens to reduce the number of casualties.

**E**vening comes, the sun sets and a brown-and-white wood thrush rises from a clump of trees beside a farmer's field in upper New York State. As it climbs, it joins a gathering storm of migratory songbirds moving across the region. This nightly event in a three-month spring procession includes tens of thousands of birds, each making the flight across Lake Ontario en route to summer breeding grounds farther north.

The wood thrush, which weighs about as much as a golf ball, has already been travelling for about two weeks. It left its wintering grounds in Honduras and flew across the Gulf of Mexico and up the Mississippi Valley before making this pit stop in New York State. Two nights later it will reach its nesting area in central Ontario.

Clouds cover the lake, obscuring the stars by which the thrush usually navigates. After a few hours, the bird is heading toward the misty glow of the Toronto skyline. City lights become a powerful distraction. The thrush grows disoriented and smashes into the window of an office tower. The bird's 3,000-kilometre journey, the same that innumerable generations before it have flown, has come to an abrupt and violent end.

Welcome to an urgent new battlefield in bird conservation: the city. Urban areas are filled with obstacles and threats to migratory birds, and, as such areas grow up, out and ever denser, so do the problems they cause. The dead wood thrush is one of an estimated one to 10 million birds killed in Toronto every year due to collisions with buildings and other structures. According to one expert, an average of 10 birds a year hit each Toronto building.

Collisions with buildings are only part of the issue. Destruction of natural habitat and the loss of food and shelter that urban expansion causes may be taking an even bigger toll, according to Bridget Stutchbury, a biologist at York University who studies migratory songbirds. The eastern half of North America is an "urban obstacle course," she says, with fewer and fewer places where birds can refuel quickly enough to get to their summer grounds in time to reproduce. Add rapid habitat loss in the birds' wintering grounds, and it's not surprising that migratory bird populations are "crashing," says Stutchbury.

That's the bad news. The good news is that there is fresh optimism among bird conservationists about reducing the urban toll. In January, Toronto became the first major city in North America to require most new buildings to meet "bird-friendly" construction standards. And two months earlier, more than 100 bird experts gathered in the city for its first-ever international Symposium on Bird Conservation in Urban Areas. "We suddenly find ourselves leaders in this area," says Kelly Snow, the planner who coordinates Toronto's bird-friendly initiatives. "It's an interesting and exciting step."

**T**oronto may be garnering attention and credit for taking up the cause of migratory birds, but a small, mostly volunteer-run organization – Fatal Light Awareness Program (FLAP) – got things rolling.

Michael Measure founded FLAP in 1993. A former artist and gallery operator, the bird enthusiast started by simply picking up dead and injured birds around downtown buildings. Within a few years, he made bird rehabilitation and conservation in cities his life's work, aiming, according to FLAP's website, to create "a 24-hour, collision-free urban environment for migratory birds." Similar organizations or programs now exist in Montreal, Halifax and several U.S. cities. Two of them – Project Safe Flight in New York and the Chicago Bird Collision Monitors – got start-up help from FLAP. The group has also been working with communities around Toronto, including in Markham and Mississauga.

FLAP volunteers patrol the bases of downtown and sub-urban office buildings throughout the day, looking for fallen birds. (Although lights at night attract birds, more collisions actually occur in the daytime, when birds are fooled by deceptive reflections in the glass.) Volunteers take any injured birds to the Toronto Wildlife Centre for care and rehabilitation. About 40 percent of the birds the volunteers find alive survive, says Susan Krajnc, FLAP's program assistant and volunteer coordinator.

Of course, preventing the injuries and deaths by reducing collisions is the ultimate goal. To that end, Measure has been lobbying municipal officials and encouraging building owners to make their structures safer for birds. Initially, this meant turning out the lights at night. Then FLAP increased its emphasis on averting daytime collisions through the use of visible window treatments, shading and screening, as well as grills, artwork, awnings, overhangs or even angled walls and glass to minimize reflection. The city became an active participant in the cause, and now most new buildings must incorporate such features up to a height of 12 metres above ground.

Over the last decade, more than 100 buildings in Toronto have adopted FLAP's recommendations. Now, FLAP expects this number to grow as the city takes on a bigger role educating builders and property owners. FLAP plans to spend more time working in other cities as well as the Great Lakes. "It's a huge flyway area for so many birds," says Krajnc.

**F**ew people can appreciate Krajnc's point more than Stutchbury. In 2007, the York University professor headed a research team that attached tiny geolocators to the backs of wood thrushes and other songbirds to track their movement and location during migration – the first time the technology was used on such tiny fliers. Birds were caught on their summer grounds, fitted with the "back-packs," released and then netted again the following spring when they returned to Canada. The researchers then downloaded and plotted the data.

"Each one of these tracks is an individual bird," explains Stutchbury, pointing at a computer screen in her office. On the monitor is a map of North and Central America with several sets of lines, each representing the outbound and inbound journeys of a bird between the breeding area in northern Pennsylvania (the focus of Stutchbury's study) and its winter range in Central America. The data also tell



These birds were collected after colliding into office towers. Top row, left to right: northern flicker, indigo bunting, scarlet tanager, gray catbird. Middle: fox sparrow, downy woodpecker, Baltimore oriole. Bottom: rose-breasted grosbeak.

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## What You Can Do

### **Volunteer with the Fatal Light Awareness Program (FLAP):**

FLAP (flap.org), Ontario's premier urban bird rescue organization, needs volunteers during the spring and fall migration seasons to patrol the grounds around the city's biggest office towers and collect dead or injured birds that have collided with the buildings. Injured birds are then taken to the Toronto Wildlife Centre for care and rehabilitation.

**Reach out to an ornithological group:** Many such groups conduct outings for non-members, focusing on migratory songbirds and urban birding. To find a group near you, explore the Ontario Field Ornithologists website (ofa.ca).

**Apply building guidelines:** If you own a business or office property, make sure it conforms to the City of Toronto's new bird-friendly guidelines (toronto.ca/environment/greendevlopment.htm), even if your building is not in that city.

**Make your property bird friendly:** Homeowners can turn their backyards into oases for migratory songbirds simply by adding native plant species that furnish them with food (berries, seeds) and shelter. Better still, install a pond or another source of fresh water. At night during migration season, keep your lights off or your shades drawn. For more suggestions, contact the Canadian Wildlife Federation (cwf-fcf.org) or Project CHIRP! (projectchirp.com).

**Buy certified bird-friendly, shade-grown coffee:** Perhaps the biggest threat to migratory songbirds is the loss of natural habitat in their wintering grounds in Central and South America. Help preserve habitats by supporting bird-friendly, shade-grown coffee plantations that, unlike industrial farms, are sustainable enterprises.

**Brian Banks**

her how far they flew each day and in what direction. "We've never been able to capture this before," she says.

A key part of Stutchbury's research explores where the birds overwinter and breed in summer. She has discovered that while birds like the wood thrush have huge habitat ranges, individual birds travel between very specific locations within those ranges – valuable information when planning where to focus conservation and protection efforts.

As the birds navigate their way between migration sites, they encounter numerous obstacles. To illustrate, Stutchbury displays on the screen a composite satellite image of North America at night. The eastern half of the continent, from Florida to Ontario and Quebec, is lit up like Times Square. It is this perspective that anchors Stutchbury's belief that habitat loss from urbanization is a bigger factor in declining populations than collisions with buildings and other structures. "To get back to their breeding grounds from the south, they have to go through all this [urban congestion]," she says. "These little birds ... need little forest patches, they need good stopover habitat to fuel the journey. If they land in a place with little food, they have to stay on the ground a lot longer." Such delays leave birds vulnerable to injury and predation, and threaten their ability to successfully reproduce.

On this front, city residents can make a critical difference by providing habitats where the birds can stop. The Canadian Wildlife Federation (CWF) offers information and advice for people who want to make their properties bird friendly by planting native sources of food and providing shelter and clean water. Recommended plantings vary by area and preference, but Christina Sharma, a CWF volunteer in Toronto, favours shrubs such as elderberry and grey dogwood. "They both produce berries at the end of the summer," she says, which nourish birds heading south in the fall.

Under the auspices of Project CHIRP! (Creating Habitat In Residential Areas and Parkland), an organization she founded in 2007, Sharma has spent years trying to raise

## Homeward bound

Whether you live in Windsor, Ottawa or somewhere in between, you will probably see these species fly by as they return from their southern wintering grounds.

In March, ducks, raptors, meadowlarks and cowbirds appear. Tree swallows and other early-arriving insectivores usually show up by April 1. Then Ontarians start to see more waterbirds, a few sparrows and some early warblers.

May is the peak of migration season, bringing flycatchers, vireos, tanagers, thrushes, warblers and orioles. In late May, bird watchers can also spot Arctic-bound sandpipers. By mid-June, bird sightings decline, as most local species are nesting.

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awareness of threats to songbirds and helping people make their backyards bird friendly. Her own yard, featuring a mix of shrubs and trees, as well as a protected pond, serves as a demonstration site. "The pond is a real magnet for songbirds," she says. Sharma stresses that bird friendly does not mean overgrown. "Shrubs, trees and other features can be planted in a contemporary way while still meeting the needs of songbirds."

Sharma's message is about co-existence, a common thread in all urban bird conservation work. As planner Snow notes, "The more the public learns about what we're actually sharing the city with, the more interest there will be in protecting it and acting as stewards." Sharma has already embraced these goals. Her property is alive with songbirds for much of the year, but especially during migration. This spring, she is looking forward to the return of a number of her favourites: warblers, red-eyed vireos and thrushes. "That's what I watch for," she says. 🐦

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