



Birds and Residential Window Strikes: Tips for Prevention

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Bird and Residential Window Collisions: A Serious Problem

Collisions with man-made structures are one of the primary causes of bird mortality. In fact, up to a billion birds are killed each year in the United States due to window strikes. Perhaps surprisingly, more birds collide with residential house windows than skyscraper windows. Approximately 50 percent of the time, these strikes result in death. Birds may die upon impact or later on from causes including internal bleeding or debilitating injuries such as broken bones, which increase susceptibility to predation (*Figure 1*).

Which Birds Are Affected?

More than 225 North American avian species are known to be victims of fatal window strikes. These strikes are most commonly reported for the dark-eyed junco, ovenbird, song sparrow, and white-throated sparrow. Some species are

affected more than would be expected based on their population sizes, such as the gray catbird, brown creeper, ruby-throated hummingbird, yellow-bellied sapsucker, and black-and-white warbler. Species of conservation concern are also affected. Indeed, window strikes contribute to population declines in species such as the painted bunting, sharp-shinned hawk, wood thrush, Canada warbler, golden-winged warbler, and Kentucky warbler.

Why Do Birds Collide with Windows?

Birds strike windows for several reasons involving the transparency and reflective qualities of glass, including: (1) they believe they are on a safe flight path because they see the landscape around them reflected from the glass; (2) they see into the window to a desired habitat, either inside the home or through to the other side of the home, and don't perceive the glass



Figure 1. Bird found dead from a window strike (Photo by Klaise is licensed under CC0)

as a barrier; and (3) they see their own reflection in the glass and attack the window. Territorial aggression can result in bill injuries, but it is rarely as fatal as inadvertent strikes.

The good news is that simple steps can be taken to prevent birds from striking windows. For instance, window modifications can limit reflection and transparency, making birds aware of the presence of glass. In addition, adjustments to your yard and home interior can prevent attraction to windows and minimize injury to birds when they do strike.

Guidelines for Preventing Bird Strikes at Your Home

Below are practical, do-it-yourself tips for limiting bird collisions at your residence. Many of these tips can be implemented at little or no cost. Additionally, commercial products designed for preventing home window collisions that have been tested and endorsed by the American Bird Conservancy can be found on its website at www.birdsmartglass.org.

For the best outcome, use a combination of these research-driven solutions:

1. Simple window modifications

These tips reduce the reflection and transparency of windows to alert birds to the surface of glass:

- **Cover windows with markers.** Place decals, stickers, or other markers on the outside of windows. Contrary to popular belief, the shape of the marker does not matter (e.g., hawk silhouettes are no more effective than other shapes). However, the markers must cover

most of the glass to prevent the appearance of a safe environment reflected in the glass (Figure 2). Therefore, individual markers should be larger than $\frac{1}{8}$ inch by $\frac{1}{8}$ inch and should be placed close together so that there are no areas of open glass greater than 2 inches by 4 inches.

- **Cover windows with tape.** Use weatherproof tape on the outside of windows to help make glass visible to birds. Tape should be applied in horizontal stripes at a maximum of 2 inches apart or in vertical stripes at a maximum of 4 inches apart. It can also be applied in patterns such as lattice designs.
- **Cover windows with film.** Place an adhesive film over external window glass that reduces or eliminates environmental reflections, hence preventing territorial aggression or the appearance of a flight path. One-way perforated film is transparent from the inside but opaque from the outside (Figure 3). Additional types of film incorporate tinting and stripes or patterns.

Hint: These tips can also be applied to external marble walls, which often produce a reflective surface similar to windows.



Figure 2. A single decal is not enough to prevent bird strikes. (Photo by tiegeltuf is licensed under CC BY-SA 2.0)

2. Simple adjustments to yard and home

These tips are aimed at not luring birds to your windows or home interior:

- Place **bird feeders and birdbaths** close to or far from your windows. One approach to the placement of avian attractants such as bird feeders and birdbaths is to position them within 1.5 feet of windows. This way if a bird flies into the window after visiting the attractant, which may happen when a bird is startled off, it will likely not strike the window with a strong enough impact for significant injury. This is particularly true if your windows have an added layer of protection, such as external screens or nets (*see the next section*). If your windows do not have this protection, it may be best to place attractants more than 30 feet away from windows. A bird in startled flight is unlikely to reach the windows at this distance. Additionally, this distance can help prevent window strikes by prey species, such as hawks, which may strike a close window with high momentum if drawn in from above by the birds at your attractants.
- Move **houseplants** away from windows. To prevent birds from being tempted to fly through a window to reach a houseplant, move the plant so it is not visible from the outside.
- Obscure **clear views** through your residence. Close external shutters and internal blinds, shades, or curtains when not in use to limit transparency of windows. Close internal doors between rooms that would allow birds to see an open path through a window to the other side of the house.

3. Alternative window alterations

The following methods may take a little more time, money, or effort than the simple window treatments above, but they may be preferred for aesthetic reasons:

- Install **netting** outside windows. Install netting mounted on a frame or hung from above a window approximately 2 inches from exterior window glass. A soft, flexible but taut small-mesh netting



Figure 3. Application of one-way perforated anti-bird-strike film to a window (Photo by Billings Brett, U.S. Fish and Wildlife Service)

(approximately $\frac{5}{8}$ inch) will allow a bird on a flight path into a window to first hit the net and bounce off without getting caught in the net.

- Install **screens** outside windows. Similar in function to netting, a screen can be installed to hang 2 inches in front of a window. (Or, if you are installing new windows, choose those that have an external screen.)
- Install **cords** outside windows. Install dark-colored, hanging nylon cords 2 inches outside windows and a maximum of 4 inches apart as a visual indicator to deter birds from flying into the glass.

What To Do When a Bird Strike Occurs

- Observe a dazed or injured bird closely. If it is just stunned, it may recover on its own within a few minutes. Remember, the Migratory Bird Act makes it illegal to handle or keep a migratory bird captive without a permit. If a bird appears to be more seriously injured, such as having broken bones, contact a licensed wildlife rehabilitator for treatment. An agency that deals with wildlife, such as your state's Department of Natural Resources (DNR), or an animal control facility should be able to refer you to an appropriate rehabilitator. For example, the Indiana DNR website lists the regional conservation officers throughout the state (<https://www.in.gov/dnr/lawenfor/2755.htm>) whom you can contact either to pick up the animal or refer you to an approved rehabilitator or veterinarian. You may attempt to keep

away predators, such as house cats, while the bird recovers or while awaiting assistance.

- *Safely dispose of dead birds.* In the case of migratory birds, contact a licensed individual, such as those at a regional Department of Natural Resources (see previous bullet point), to dispose of the bird. Other birds you may dispose of yourself, but use caution as birds can carry disease. Wear disposable gloves, place the body in sealable plastic bag, and dispose of it in a covered trash container to avoid attracting predators. You may also wish to contact representatives of your local natural history facility to see if they would like to add it to their collection.
- *Report bird strikes with windows* (fatal and non-fatal) to a public database such as <https://mapper.flap.org>. The website www.allaboutbirds.org/guide/browse can help you identify the species for accurate reporting.

Conclusion

Whether you are a homeowner or renter, taking simple preventive measures inside and outside your windows can decrease bird collisions with residential buildings. In addition, check around your windows for dead or injured birds on a regular basis and respond accordingly. By implementing these tips and by spreading your knowledge of how to prevent bird strikes to others, you can help reduce a major cause of bird injuries and deaths to aid in avian conservation.

Resources

For more information on aiding avian conservation at your home as well as regionally and nationally, see the following organizations, which were referenced for this publication:

American Bird Conservancy
www.abcbirds.org

National Audubon Society
www.audubon.org

Cornell Lab of Ornithology
www.birds.cornell.edu

Fatal Light Awareness Program
www.flap.org

Sierra Club
www.sierraclub.org