

**PROJECT PREVENT COLLISION: Reducing the Number of Window-Bird Collisions at
Your Home and in Your Neighborhood**

An international study of window-bird collisions and factors influencing their frequency

sponsored by Wild Bird Centers of America, Inc.

Welcome to PROJECT PREVENT COLLISION: Preventing Window-Bird Collisions at Your Home and in Your Neighborhood! PROJECT PREVENT COLLISION is an international study of window-bird collisions that will investigate the extent to which birds collide with windows and examine factors that influence the number of window-bird collisions that occur. The study asks individuals to provide information about window-bird collisions in the past and present, to describe architectural features of the home, as well as characteristics of the yard and neighborhood. By pooling together data from each home, we will become better informed about window-bird collisions, learn more about where they occur, and how future collisions at your home and in your neighborhood can be prevented. Whether you have experienced a window-bird collision at your home or not please consider participating.

Why do we need to conduct PROJECT PREVENT COLLISION? The facts about window-bird collisions are startling. In North America, between 100 million and 1 billion birds die in collisions with windows each year. To put this into perspective, on average every building in the United States has 1-10 fatal collisions per year! Why do birds collide with windows? Window-bird collisions occur because birds do not recognize clear and reflective windows as barriers. Windows either reflect the outside environment or create a see-through effect whereby birds see through two clear windows parallel to one another and attempt to fly through to the other side. Either way, too many birds are being lost to collisions with windows.

While window-bird collisions represent a significant source of avian mortality, our understanding of the relative risk of certain characteristics that influence the number of window bird collisions is limited. This is why we need your help. We would like to invite you to participate in PROJECT PREVENT COLLISION as a citizen scientist. We ask for

approximately three hours of your time over a four-week period. In return, you may help save a wild bird's life.

WHAT DO I NEED TO DO TO PARTICIPATE IN PROJECT PREVENT COLLISION?

Attached you will find a series of survey questions that inquire about the architecture of the home, and the surrounding landscape. You will also be asked questions inquiring about past bird collisions that occurred, and will be given a procedure to follow to investigate whether window-bird collisions are occurring around the home now. Whether you have collisions occur at the home or not, your data is critical to the success of this scientific study.

Here are the five easy steps to follow to participate in PROJECT PREVENT COLLISION:

- Fill out the Personal Information Form
- Fill out the General Survey Form
- Fill out the Past History Survey Form
- Follow the protocol and fill out the Present Survey Form
- The four completed forms should be sent to:

Dr. David J. Horn
PROJECT PREVENT COLLISION
Department of Biology
Millikin University
1184 West Main Street
Decatur, IL 62522

If you have any questions, contact David Horn at 217-424-6392 or dhorn@millikin.edu

**Thank you for serving as a citizen scientist for
PROJECT PREVENT COLLISION!**

www.wildbird.com/content/project_prevent_collision

Personal Information Form

- Please fill out the following information.

Name: _____

Address: _____

City: _____

State: _____

Zip Code: _____

Phone: _____

E-mail: _____

Date submitted: _____

Would you be willing to participate in a follow-up study for PROJECT PREVENT COLLISION?

Yes _____ No _____

Would you be willing to speak with the media about your experiences with window-bird collisions and PROJECT PREVENT COLLISION?

Yes _____ No _____

General Survey Form

- Please answer the following questions.

How long have you resided at this home (round to the nearest year)? _____

How many square feet is the house (not including the basement)? _____

How many stories does your home have?

- 1
- 2
- 3
- >3

In the following table, record the number of windows facing each direction for each size category that you have at your home.

| Side Home Faces | # of Windows | | |
|-----------------|---------------------|------------------------|----------------------|
| | < 9 ft ² | 9 – 49 ft ² | > 49 ft ² |
| North | _____ | _____ | _____ |
| South | _____ | _____ | _____ |
| East | _____ | _____ | _____ |
| West | _____ | _____ | _____ |

In the following table, estimate the percentage of surface area covered by windows for each side of your home.

| Side Home Faces | % of Surface Covered by Windows | | | |
|-----------------|---------------------------------|---------|---------|----------|
| | 0 - 25 | 26 - 50 | 51 – 75 | 76 - 100 |
| North | _____ | _____ | _____ | _____ |
| South | _____ | _____ | _____ | _____ |
| East | _____ | _____ | _____ | _____ |
| West | _____ | _____ | _____ | _____ |

In the following table, record how many windows on each side of your home currently have the following characteristics.

| Characteristic | Number of windows on each side of home having characteristic | | | |
|---|--|-------|-------|-------|
| | North | South | East | West |
| Interior plants visible through window | _____ | _____ | _____ | _____ |
| Interior lights visible at night | _____ | _____ | _____ | _____ |
| Interior rooms painted with dark colors | _____ | _____ | _____ | _____ |
| Shades, drapes, or blinds drawn during day | _____ | _____ | _____ | _____ |
| Decals on windows (i.e., hawk or leaf silhouette) | _____ | _____ | _____ | _____ |
| Tinted windows | _____ | _____ | _____ | _____ |
| Screens | _____ | _____ | _____ | _____ |
| Exterior decorations (i.e., wind chimes) | _____ | _____ | _____ | _____ |

In the following table, record how many of each of the listed features are found within 100 ft. of each side of your home. Only record features if the feature would be reflected from a window on that side of the home.

| Feature | Number of each feature within 100 ft. of each side of your home | | | |
|--|---|-------|-------|-------|
| | North | South | East | West |
| Birdfeeders | _____ | _____ | _____ | _____ |
| Bird baths | _____ | _____ | _____ | _____ |
| Bird houses | _____ | _____ | _____ | _____ |
| Trees or shrubs > 5 ft. tall | _____ | _____ | _____ | _____ |
| Trees or shrubs < 5 ft. tall | _____ | _____ | _____ | _____ |
| Exterior lights left on all night | _____ | _____ | _____ | _____ |
| Other prominent features you feel might attract birds to your yard (i.e., freshwater – river, lake, pond). | | | | |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |

How often do you clean the outside of your windows?

- At least weekly
- At least monthly
- At least yearly
- Never

In the following table, record how often you observe each of the following bird predators/scavengers within 100 ft. of the home.

| | | | | | |
|---|--------------------------------|---------------------------------|----------------------------------|---------------------------------|--------------------------------|
| Raptors (Hawks, eagles) | <input type="checkbox"/> Daily | <input type="checkbox"/> Weekly | <input type="checkbox"/> Monthly | <input type="checkbox"/> Yearly | <input type="checkbox"/> Never |
| Cats | <input type="checkbox"/> Daily | <input type="checkbox"/> Weekly | <input type="checkbox"/> Monthly | <input type="checkbox"/> Yearly | <input type="checkbox"/> Never |
| Dogs | <input type="checkbox"/> Daily | <input type="checkbox"/> Weekly | <input type="checkbox"/> Monthly | <input type="checkbox"/> Yearly | <input type="checkbox"/> Never |
| Other mammals (i.e., Raccoons, skunk, opossum) | <input type="checkbox"/> Daily | <input type="checkbox"/> Weekly | <input type="checkbox"/> Monthly | <input type="checkbox"/> Yearly | <input type="checkbox"/> Never |

What is the population of your city or town?

- 1-5,000
- 5,001-25,000
- 25,001-100,000
- >100,000

How would you describe the neighborhood within a half of a mile surrounding your home in terms of housing density?

- Rural
- Suburban/Rural Mix
- Suburban
- Suburban/Urban Mix
- Urban

Please mark all habitats present within a half of a mile of your home. Record a habitat type only if it is found in a continuous block of 1 acre [70 x 70 square yards] or more. Mark all that apply.

- Woods (Deciduous, evergreen, or mixed)
- Scrub
- Grassland
- Desert
- Agricultural
- Developed areas (Industrial, commercial, or residential)
- Open areas (Golf course, athletic fields, etc.)
- Water (Fresh or salt water)

Past History Survey Form

- If you have had a window-bird collision around your house anytime in the past (whether the bird died or not), answer the following questions to help us compile data on factors influencing the occurrence of collisions.

For how many years have you been aware of window-bird collisions occurring at your home?
 _____ (round to the nearest year)

Since you became aware of window-bird collisions, approximately how many collisions (whether the bird died or not) have occurred on each side of your home.

| Side Home Faces | # of Collisions | | | | |
|-----------------|-----------------|-------|-------|-------|-------|
| | 0 | 1-5 | 6-10 | 11-20 | >20 |
| North | _____ | _____ | _____ | _____ | _____ |
| South | _____ | _____ | _____ | _____ | _____ |
| East | _____ | _____ | _____ | _____ | _____ |
| West | _____ | _____ | _____ | _____ | _____ |

Of the total collisions, approximately how many have been fatal? _____

If known, what species of birds have collided with windows at your home?

Record the percentage of window-bird collisions that have occurred during each season?

| | 0-25% | 26-50% | 51-75% | 76-100% |
|--------|-------|--------|--------|---------|
| Spring | _____ | _____ | _____ | _____ |
| Summer | _____ | _____ | _____ | _____ |
| Winter | _____ | _____ | _____ | _____ |
| Fall | _____ | _____ | _____ | _____ |

For every window at your home that has had a collision in the past (whether the bird died or not) answer the following questions:

WINDOW NUMBER: _____

(note: if you had more than 1 window in which a collision has occurred please make additional copies of this page)

LOCATION

- 1st story
- 2nd story
- 3rd story
- >3rd

DIRECTION WINDOW FACES

- North
- South
- East
- West

SIZE OF WINDOW

- Small window (< 9 ft²)
- Medium window (9 - 49 ft²)
- Large window (> 49 ft²)

WINDOW FEATURES

- | | | | | |
|--|------------------------------|-----------------------------|------------------------------------|---|
| Interior plant visible through window | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Can't remember |
| Interior lights visible at night | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Can't remember |
| Interior of room painted with dark color | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Can't remember |
| Shades, drapes, or blinds drawn during day | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Can't remember |
| Decals on windows (i.e., hawk silhouettes) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Can't remember |
| Tinted | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Can't remember |
| Screen | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Can't remember |
| Exterior decorations (i.e., wind chimes) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Can't remember |
| Can birds see through to another window from the window the birds collided with? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Can't remember |
| Does the window present a reflection of the facing habitat and sky? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Can't remember |

LANDSCAPE FEATURES – For each feature, determine whether it is in view of the window, and within 100 feet

Bird feeder Yes No Sometimes Can't remember

If yes, how many feet away is the nearest feeder from the window: _____

Bird bath Yes No Sometimes Can't remember

If yes, how many feet away is the nearest bath from the window: _____

Bird house Yes No Sometimes Can't remember

If yes, how many feet away is the nearest bird house from the window: _____

Tree or shrub > 5 feet tall Yes No Sometimes Can't remember

If yes, how many feet away is the nearest branch from the window: _____

Exterior light left on all night Yes No Sometimes Can't remember

If yes, how many feet away is the nearest exterior light from the window: _____

Please comment on other features of this window, surrounding landscape, or weather conditions, you feel are important in contributing to the number of collisions at this window:

Present Survey Form

In order to obtain an accurate estimate of the number of window-bird collisions occurring at homes, and to learn more about factors influencing the frequency of collisions, we are asking all participants to search for dead birds around their yards one day a week for four consecutive weeks.

Protocol for the Present Survey

- To participate in the present survey, please follow the easy steps below and fill out the associated forms

Supplies needed

- Gloves (i.e., leather, rubber) for searching through vegetation
- Pencil or pen
- Present survey form
- Field guide to birds (optional)

Procedure

- On the same day each week for four consecutive weeks, search the perimeter of your home for bird carcasses that may be a result of a window-bird collision.
- The perimeter should be 10 feet from the home. Searches should look for birds on the ground, and in and around the vegetation within 10 feet of the home.
- As you search the perimeter of your home, use a pace of one step every second.
- After searching around the home once, reverse your direction and walk around your home a second time.

Present Survey Results

Dates you searched for dead birds: _____

During your four weeks of searches, record how often you observed each of the following bird predators/scavengers within 100 ft. of the home.

| | | | | | |
|---|--------------------------------|---------------------------------|----------------------------------|---------------------------------|--------------------------------|
| Raptors (Hawks, eagles) | <input type="checkbox"/> Daily | <input type="checkbox"/> Weekly | <input type="checkbox"/> Monthly | <input type="checkbox"/> Yearly | <input type="checkbox"/> Never |
| Cats | <input type="checkbox"/> Daily | <input type="checkbox"/> Weekly | <input type="checkbox"/> Monthly | <input type="checkbox"/> Yearly | <input type="checkbox"/> Never |
| Dogs | <input type="checkbox"/> Daily | <input type="checkbox"/> Weekly | <input type="checkbox"/> Monthly | <input type="checkbox"/> Yearly | <input type="checkbox"/> Never |
| Other mammals (i.e., Raccoons, skunk, opossum) | <input type="checkbox"/> Daily | <input type="checkbox"/> Weekly | <input type="checkbox"/> Monthly | <input type="checkbox"/> Yearly | <input type="checkbox"/> Never |

Did you find any dead birds? Yes _____ No _____

If you did not find any dead birds - You have completed PROJECT PREVENT COLLISION! Please mail all of your information to the address listed at the beginning of the packet. Thank you for your participation and visit the PROJECT PREVENT COLLISION website often (www.wildbird.com/content/project_prevent_collision). Updates of the results from PROJECT PREVENT COLLISION will be posted frequently.

If you found one or more dead birds, please record the following information on a separate sheet for each dead bird found. (i.e., if you found more than 1 dead bird, please print out additional copies of this page and the next two pages)

BIRD NUMBER: _____

Date dead bird was found: _____

If known, what species of bird collided with the window? _____

If known, what sex is the bird? Male _____ Female _____

If known, what age is the bird? Juvenile _____ Adult _____

LOCATION

- 1st story
- 2nd story
- 3rd story
- >3rd

DIRECTION WINDOW FACES

- North
- South
- East
- West

SIZE OF WINDOW

- Small window (< 9 ft²)
- Medium window (9 - 49 ft²)
- Large window (> 49 ft²)

WINDOW FEATURES

- Interior plant visible through window Yes No
- Interior lights visible at night Yes No
- Interior of room painted with dark color Yes No
- Shades, drapes, or blinds drawn during day Yes No
- Decals on windows (i.e., hawk silhouettes) Yes No
- Tinted Yes No
- Screen Yes No
- Exterior decorations (i.e., wind chimes) Yes No
- Can birds see through to another window from the window the birds collided with? Yes No
- Does the window present a reflection of the facing habitat and sky Yes No

LANDSCAPE FEATURES – State whether each feature was in view of the window, and within 100 feet

Bird feeder Yes No

If yes, how many feet away is the nearest feeder from the window: _____

Bird bath Yes No

If yes, how many feet away is the nearest bath from the window: _____

Bird house Yes No

If yes, how many feet away is the nearest bird house from the window: _____

LANDSCAPE FEATURES (cont.)

Tree or shrub > 5 feet tall Yes No

If yes, how many feet away is the nearest branch from the window: _____

Exterior light left on all night Yes No

If yes, how many feet away is the nearest light from the window: _____

Please comment on other features of this window, surrounding landscape, or weather conditions, you feel are important in contributing to the collisions at this window:

Do you know specifically when the collision occurred? Yes _____ No _____

If yes, please answer the following questions.

During what time of the day did the window-bird collisions occur at this window?

- 6:00 AM – 9:00 AM
- 9:01 AM – 12:00 PM
- 12:01 PM – 3:00 PM
- 3:01 PM – 6:00 PM
- 6:01 PM – 9:00 PM
- Other

Record temperature at the time of collision:

- > 0° F
- 1° - 32° F
- 33° - 64° F
- 65° - 96° F
- > 96° F

Record cloud cover at the time of collision:

- 0 - 25%
- 26 - 50%
- 51 - 75%
- 76 - 100%

Record precipitation at the time of collision:

- None
- Light rain (drizzle)
- Moderate rain
- Heavy rain (thunderstorm)
- Freezing rain/sleet/hail
- Light snow (flurries)
- Moderate snow
- Heavy snow (> 1 inch per hour)

Snow cover and depth at the time of collision:

- None
- Snow present and covering < 50% of yard
- Snow present and covering 51 - 90% of yard
- Snow present, covering > 90% of yard, with a depth < 2 inches
- Snow present, covering > 90% of yard, with a depth 2 - 4 inches
- Snow present, covering > 90% of yard, with a depth of > 4 inches

Was the sun shining on the window involved in the collision?

- Yes
- No
- I do not know

Was a predator or other disturbance present at the time of the collision? If so, what kind?

- Cat
- Dog
- Corvid (Crow, Jay)
- Raptor (Eagles, Hawks)
- Loud noise
- Other _____

At the time of collision, could birds see through to another window from the window the birds collided with?

- Yes No

At the time of collision, does the window present a reflection of the facing habitat and sky?

- Yes No

Comments

- Please share any other information you feel is pertinent in advancing our knowledge about window-bird collisions.

After you have recorded all of the dead birds you found, you have completed PROJECT PREVENT COLLISION! Please mail all of your information to the address listed at the beginning of the packet. Thank you for your participation and visit the PROJECT PREVENT COLLISION website (www.wildbird.com/content/project_prevent_collision) often. Updates of the results from PROJECT PREVENT COLLISION will be posted frequently.