



Approaching fall migration bird strikes as a seasonal education campaign

Dr. Christine Sheppard, American Bird Conservancy
Roger Sweeney, Virginia Zoo

American Bird Conservancy



Comparative Mortality

Collisions with	Date of reference	Mortality estimate
Cell towers	2012	6,800,000
Power lines	2005	175,000,000
Buildings/glass	2013	300,000,000– 1 billion (almost half on private homes)
Cats	2013	1.5–3 billion

Links to sources at:

<http://www.abcbirds.org/abcprograms/policy/collisions/index.html>



Avian and human vision -
more different than you think,



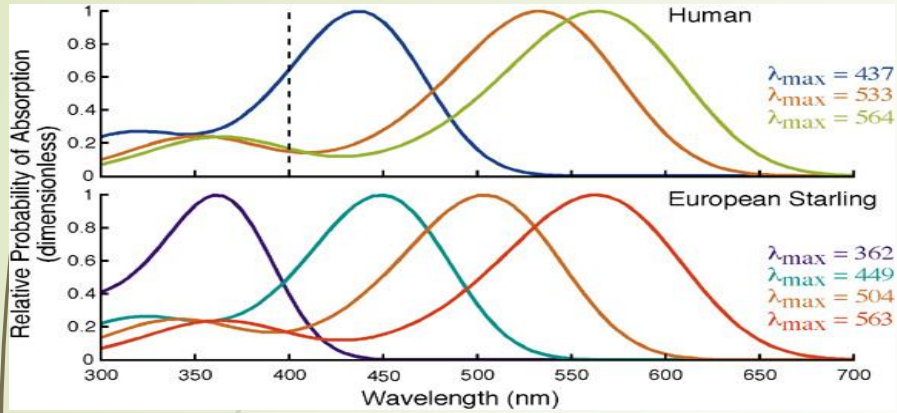
GORILLA



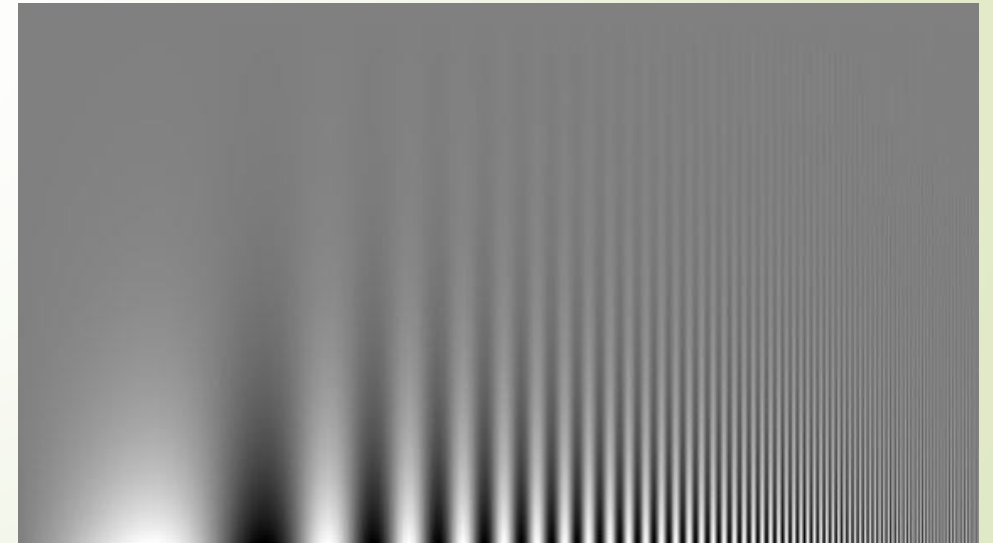
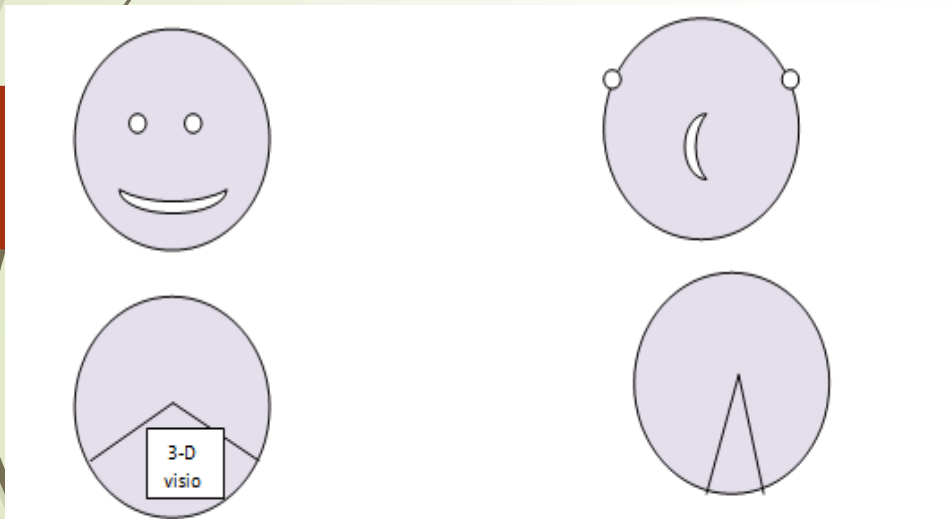
HUMAN



Bird's eye views



Birds aren't always looking where they're going



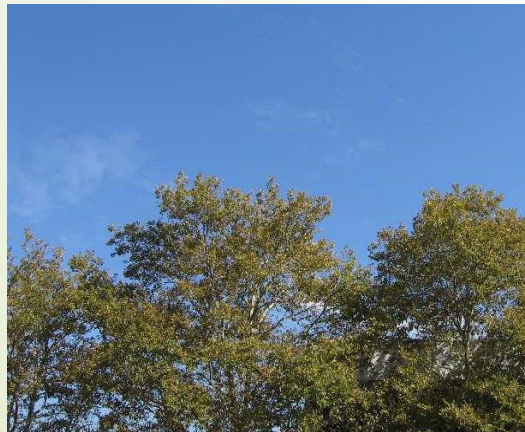
Contrast sensitivity chart



People think they can see glass



Markings tell people glass is there but birds don't speak architecture – although they can and do learn about specific pieces of glass











AUTOMATIC SPRINKLER
SHUT OFF VALVE
28.5 FEET
OPPOSITE THIS SIGN

See-through



Same window, different times

Research:
We can quantify the relative threat of different
materials and treatments

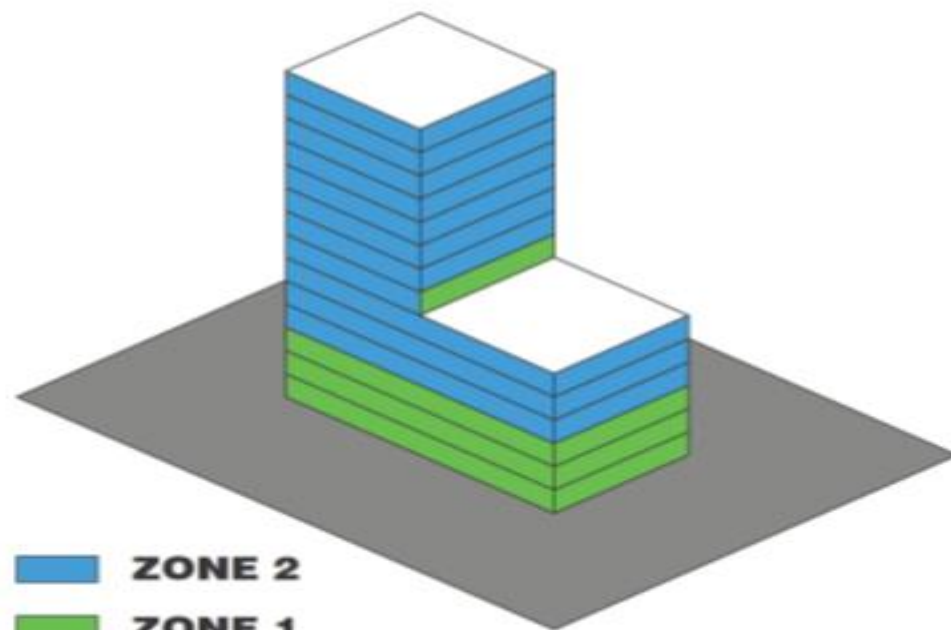




STICKS AND A CARROT

Legislation: Federal, State, Municipal





LEED PILOT CREDIT # 55







www.abcbirds.org



YOU CAN SAVE BIRDS FROM FLYING INTO WINDOWS!



Millions of birds die every year flying into windows, because they can't tell reflections from trees, plants and sky. *Most of those windows are on houses.*

Never had a bird hit your window? Perhaps you have been lucky—so far. More likely, you haven't been around to see or hear it when it happened, and the bird has either flown off to die elsewhere or been scavenged by a neighborhood cat, raccoon, or crow. But the odds are that sooner or later, your windows will kill a bird.





Not all windows are equally hazardous. Check to see which of your windows are most reflective, and closest to areas where you see birds when they are active. **Collisions happen more frequently during spring and fall migration periods.**

Even small windows can be dangerous, as many birds fly into small spaces such as tree cavities or between branches.

Research has identified solutions to alert birds to windows. The easiest of these involve applying visible markings to the outside of windows in patterns that the birds can see while requiring **minimal glass coverage** to keep your view.



Collisions.abcbirds.org



Model legislation
and policies



Virginia Zoo - Change in bird strike occurrences after new Asia exhibit completed in 2011



17 species recorded as bird strikes in recent years;





Defining the problem

- Large increase in bird strike events started in 2012
- Increase in bird strikes had strong correlation to fall migration – 78%
 - One month period .
- Increase in bird strikes had strong correlation to a target species – 78%
 - 17 total species have been recorded as bird strikes at zoo in recent years.
- Bird strikes of target species that occurred within 2-week migration period – 93%

Assessing bird strike records in 2012 after new Asia exhibit established

In 2011, we started documenting collisions

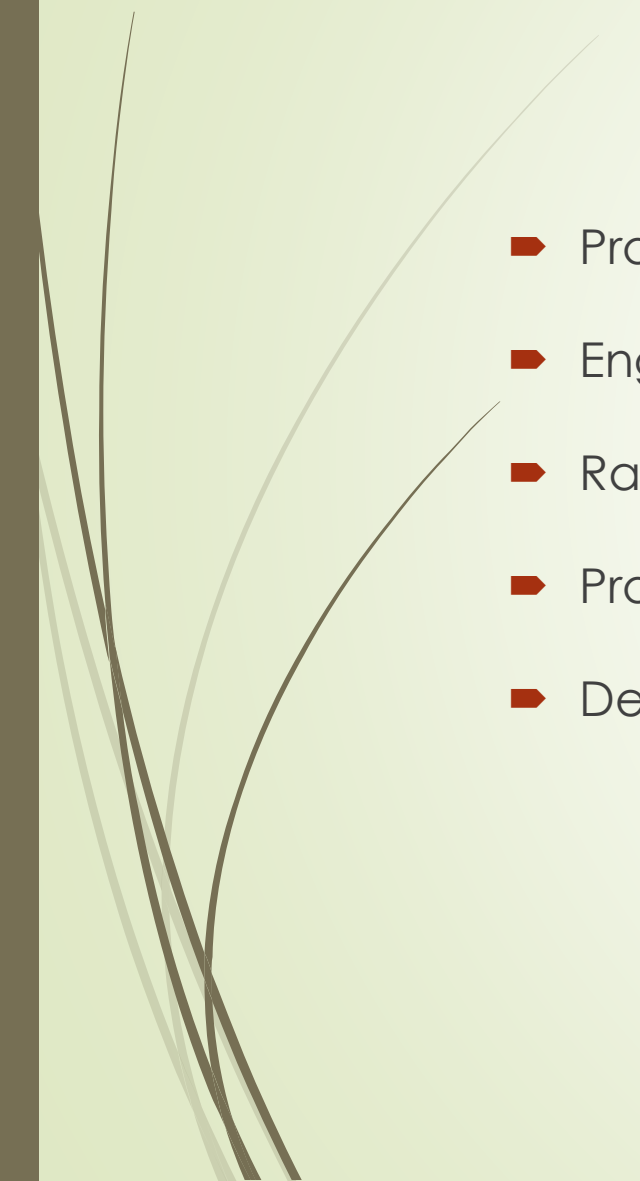
In 2012, we recorded 40 incidents of birdstrikes on zoo grounds:

- 31 of 40 (78%) occurred at windows of the orang exhibit.
- 33 of 40 (83%) were fatal.
- 30 of 40 (75%) occurred at windows with decals.
- 31 of 40 (78%) were Yellow-rumped Warblers.
- 29 of 31 strikes by Yellow-rumped Warblers occurred during the two-week period from Oct 19 - Nov 1.
- 31 of 40 (78%) occurred during the one-month period of Oct 7 - Nov 6.





Goals for addressing the problem

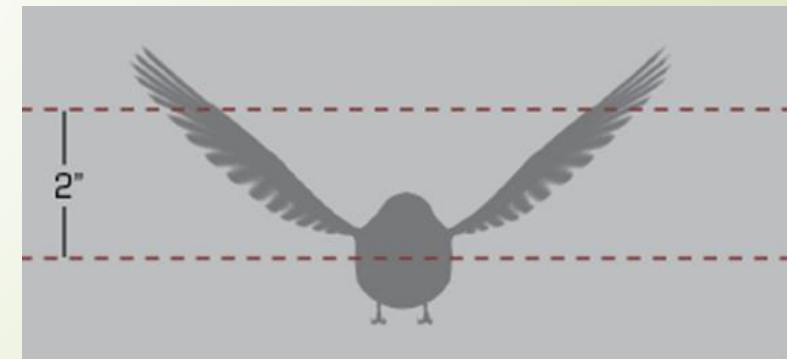
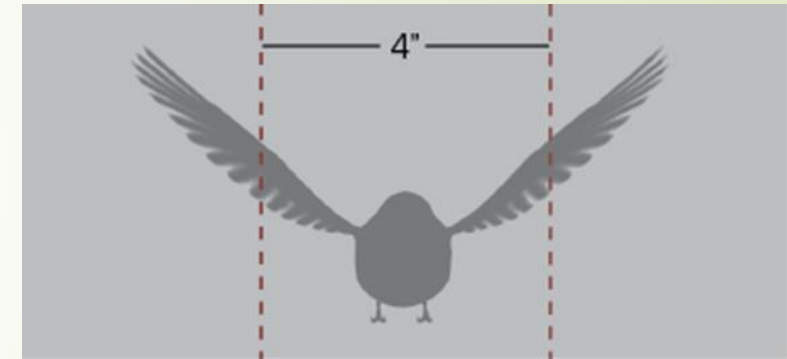
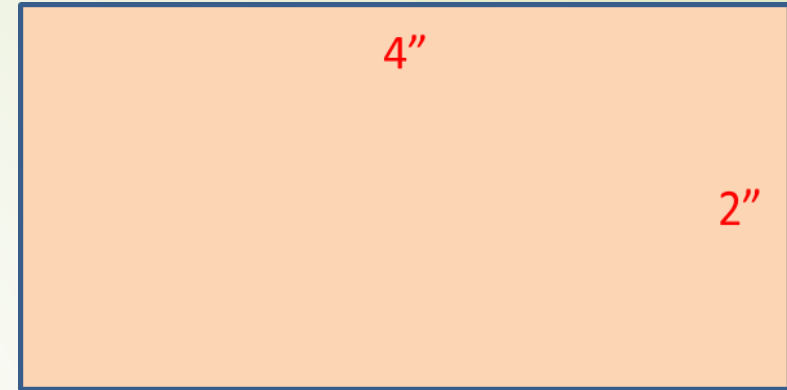
- Provide a higher level of prevention on exhibit glass during fall migration period.
 - Engage our educators and docents to advocate for birds at this time of the year.
 - Raise awareness of the problem and solutions to community during fall migration.
 - Provide student research opportunities.
 - Develop unique public art component to catch public attention.
- 

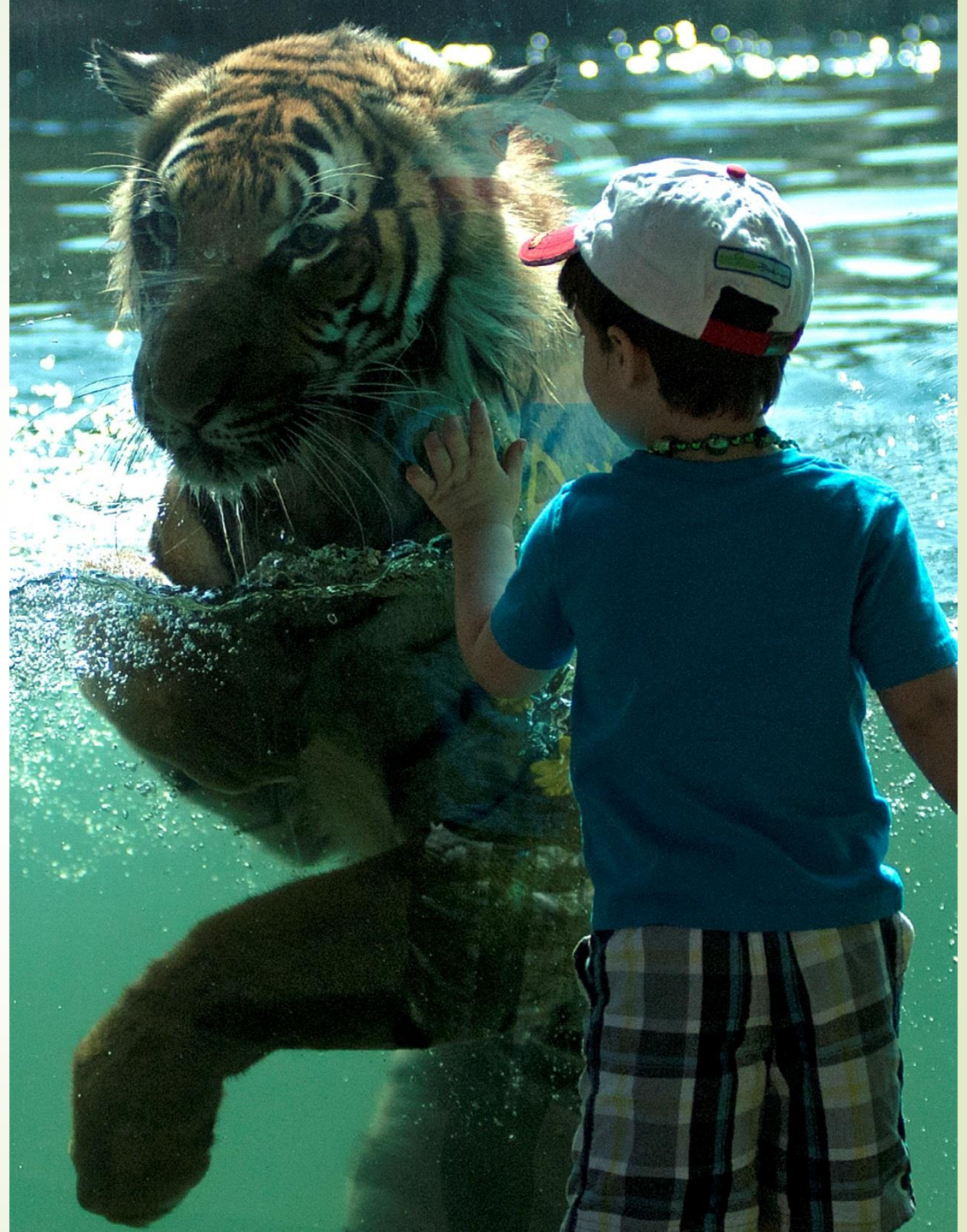
Solution ?



The easiest (and often cheapest) solution is to put a pattern on the glass

- Cheap to create or buy
- Short- or long-term
- Easily retrofit to existing structures/windows
- Very effective at preventing bird strikes, when following the “2x4 Rule”

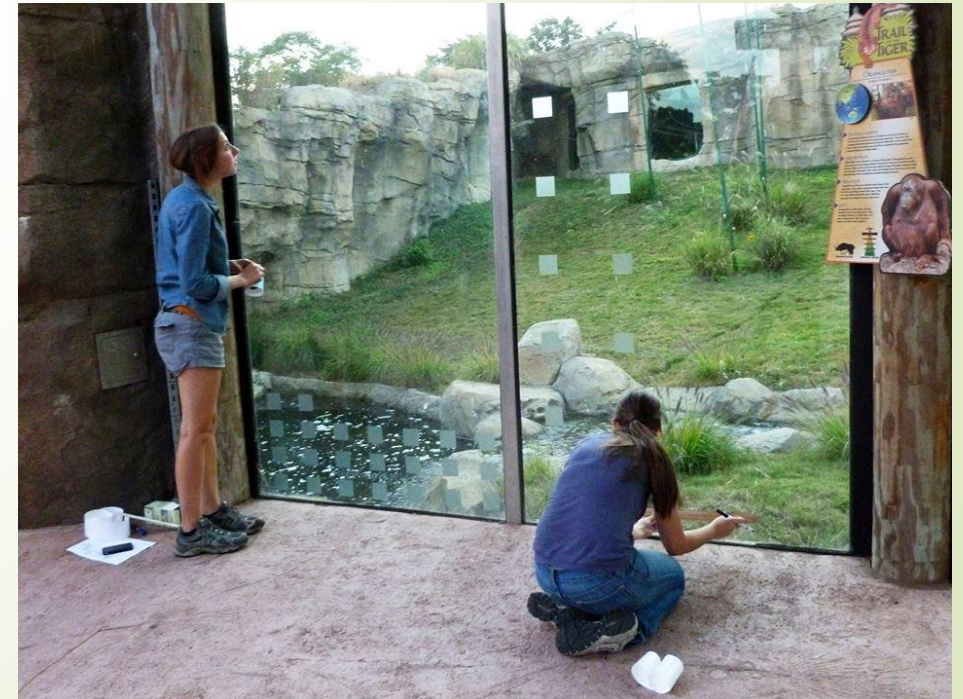




Window treatment study in 2013

- (control)
- 5% coverage
- 2 inch horizontal
 - Lines
 - Blocks
- 4 inch vertical
 - Lines
 - Blocks

Also made some windows available for public art separate from student project.



Increased level
of windows
treatment for
Fall migration.

Removable
education
panel for mist-
netting.



Education department component

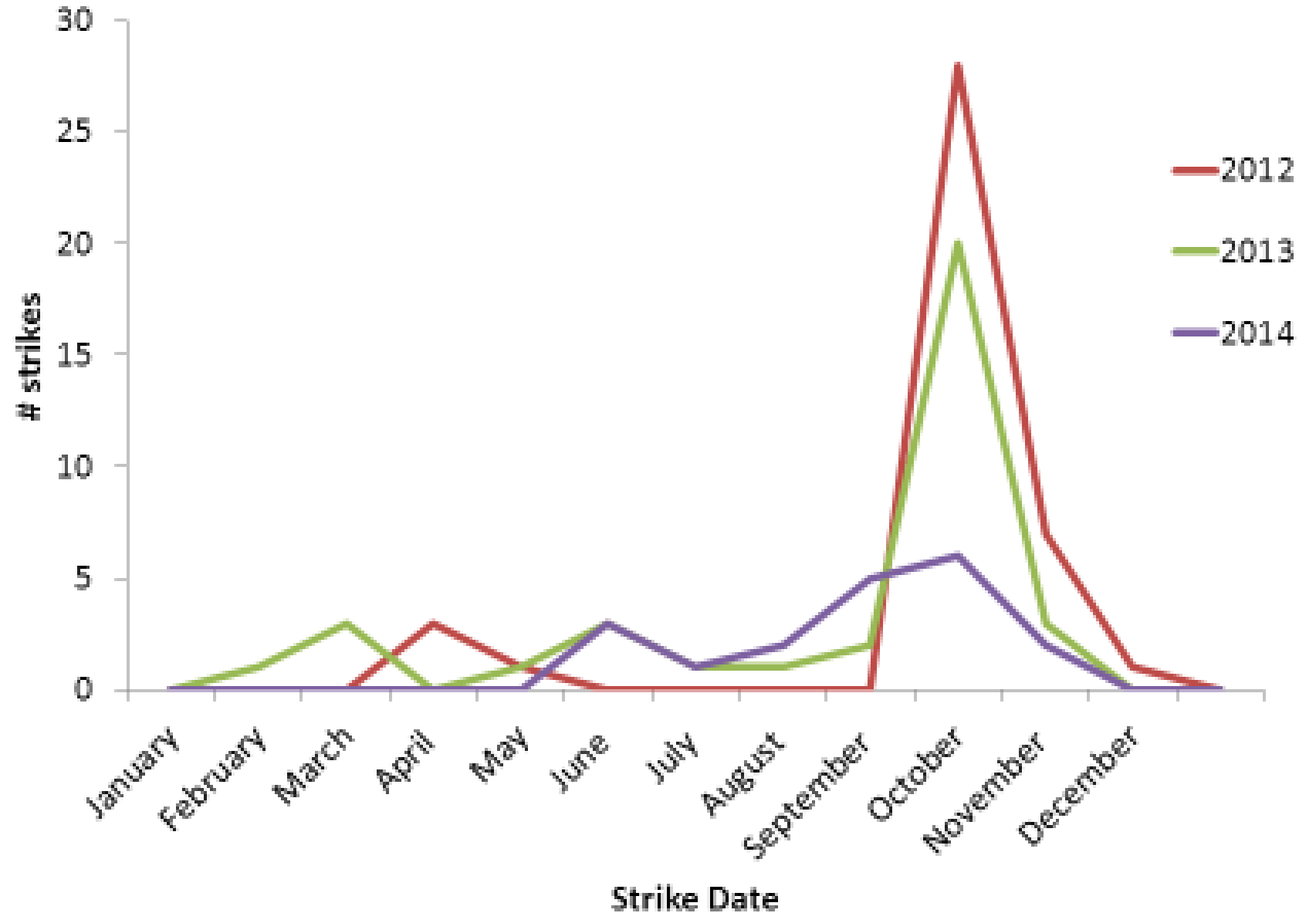
- Developed exhibit signage
- Set up a table of biofacts related to this subject at weekends
- Coordinated keeper talks on the subject
- Provided ABC information handouts on the subject
- Demonstrated how ABC BirdTape is used and where you can get it.



Using a citizen art component to increase public attention



Weekly Window Strike Comparisons



Results

- 66% decrease in number of bird strikes during fall migration
 - from 35 birds down to 12 birds
 - Still working to reduce that number
- Education component seems to be effective, not quantified to date.
- Public art component is very popular and catches consistent press coverage.
- Student research in progress, combines with other projects at zoo on native passerines.