Scientists Discovered Why Birds Keep Crashing Into Planes

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Trained hawks are been used to chase off birds at the Toronto International airport.

Scientists discover that birds could not demonstrate a danger reflex avoidance maneuver for the objects traveling towards them faster than 55mph.

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-- Airliners reported over 11,000 birds smashing into airplanes in 2013 alone. In addition, the statistic showed that at least 255 people have been killed in accidents caused by birds hitting airplanes since 1988. Another study showed that on US highways, around 80 million birds have been killed in collisions with moving vehicles.

The numbers agitated scientists to solve a mystery of why the birds do not avoid the certain danger on the path of quickly approaching objects.

Measuring the individual response of the brown-headed cowbirds to approaching danger, the researchers found that the birds easily escaped vehicles traveling up to 60 miles per hour, but at higher speeds, they were unable to respond and begin to fly away when ‘virtual truck’ has already run them over.

"Brown-headed cowbirds in our study usually managed to respond quickly enough to avoid virtual collisions during simulated low-speed vehicle approaches, but they were often overwhelmed by high-speed approaches," the study says.

It turns out that cowbirds process their risk of danger, based on distance, not speed. So, when the vehicle appears to be about 100 feet away, the birds instinctively begin to fly off. However, if the object is moving too fast, they simply do not see it as the danger. The scientists find the avoidance speed limit of the cowbirds is below 55mph.

The airplanes are moving a lot faster than the birds could calculate the danger of collision. Passenger jets typically take off at about 130-140kts (150mph), and landing at 120-130kts. Amongst the most famous bird hit airplane accident was the one when the flock of the Canadian geese hit the US Airways Flight 1549 forcing pilots to land on the Hudson River in New York City.

Airports across the globe have various ways of keeping nearby birds under control. Some release hunting dogs, some shoot at them, and some even release trained hawks – like Toronto International Airport - that chase of the birds around the runway.

The pilots also have in-flight strategies for dodging birds with a death wish. “Avoid areas such as marshlands and landfills because birds like to congregate near them,” writes the Aircraft Owners and Pilots Association. “Also, avoid flying beneath a flock of birds. When birds sense danger in the air they have a tendency to dive.”