

Where, oh where, has the road kill gone?

March 18 2013



This image shows a road killed cliff swallow. Credit: *Current Biology*, Brown et al.

Millions of birds die in the US each year as they collide with moving vehicles, but things have been looking up, at least in the case of cliff swallows. Today's swallows are hit less often, thanks to shorter wingspans that may help them take off more quickly and pivot away from passing cars. The findings, reported in the *Cell Press* journal

Current Biology on March 18, show that urban environments can be evolutionary hotspots.

"Evolution is an ongoing process, and all this—roads, SUVs, and all—is part of nature or 'the wild'; they exert selection pressures in a way we don't usually think about," says Charles R. Brown of the University of Tulsa.

Brown and his colleagues, including Mary Bomberger Brown from the University of Nebraska–Lincoln, have been studying cliff swallows in Nebraska since 1982. The birds there build clusters of mud nests attached to vertical walls under bridges, overpasses, or railroad tracks, often in colonies of thousands.



This image shows living birds at their nest. Credit: *Current Biology*, Brown et al.

Every year, for the last 30 years, the researchers have traveled the very same roads to collect dead birds and compare them to birds that died accidentally in other ways.

Those road kill surveys now reveal a sharp [decline](#) in [mortality](#) over the last 30 years, a drop that can't be explained by declines in the [bird population](#) or in traffic volume. The birds that continue to die on the roads are those with longer-than-average wingspans.



This image shows a massive colony located on an interstate highway bridge in Nebraska. Credit: *Current Biology*, Brown et al.

"Longer-winged swallows sitting on a road probably can't take off as quickly, or gain altitude as quickly, as shorter-winged birds, and thus the former are more likely to collide with an oncoming vehicle," Brown explains.

It's possible that other factors are also at play. For instance, swallows do learn from each other. Regardless of the underlying causes, the study's findings definitively show that traffic-related mortality can lessen over time even when traffic does not.

The researchers say that may be good news for other species—including turtles and snakes—which are also known to suffer significant mortality on the nation's roadways.

More information: Current Biology, Brown et al.: "Where has all the road kill gone?." [dx.doi.org/10.1016/j.cub.2013.02.023](https://doi.org/10.1016/j.cub.2013.02.023)

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