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Towering Injustice

Thousands of towers pierce the nation's skies to feed our exploding technological needs. Are birds paying the price?

By Deborah Hufford



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Not only are millions of birds killed when they collide with tall steel communications towers, but the blinking lights of the towers may have a strange mesmerizing effect that causes birds to circle towers, sometimes in huge flocks, until they collide or simply fall out of the sky from sheer exhaustion.

Bird Conservancy (ABC) issued a report, "Communications Towers: A Deadly Hazard to Birds," which has become a political lightning rod for an issue that had long been ignored. The ABC report has been the most extensive and methodical study of tower kills to date and combined the forces of sporadic studies and individual reports conducted over the last 50 years. The study observed that between 4 and 40 million birds are killed annually by towers. The report cited more than 230 species — more than 50 of them rare or endangered — as the most commonly killed. Most at-risk migratory songbirds.

"This is more than a smoking gun. It's a blazing gun," says Gerald Winegrad, an attorney with the ABC, the Washington D.C.-based advocacy non-profit group.

"By no means are these estimates exaggerated," says Al Manville, a U.S. Fish and Wildlife Service (FWS) biologist in charge of migratory birds and other international issues. FWS believes that at least 350 species — more than half the species in the United States — are at risk from proliferation of cell phone towers, television towers and other communications apparatus. "We could have well over 100,000 towers of various sizes in the country," says Manville. "And with the exponential growth of the cell phone and television industry, the problem is only going to get worse."

Vicious Circle

Bird deaths from towers are caused by a couple of different phenomena, experts say. Many birds simply collide with the towers or with the supporting guy wires, especially during conditions of poor visibility. Faster flying birds such as waterfowl or shorebirds are more prone to this demise.

Another type of mortality may be caused, ironically, by the lights of the tower themselves. During conditions of low cloud ceiling or fog, birds lose their celestial cues for nocturnal migration and have no way of orienting themselves, either from the sky or from the landscape below. When they

pass a lighted area, the directional light refracts off the moisture particles in the air. The birds then attempt to orient themselves by keeping the light at the same angle to their bodies, as they would a natural light source. Consequently they end up flying in endless circles around the towers, uttering eerie distress calls. During peak migration, thousands of birds can get caught in this mortal maelstrom. Death often results when birds collide with the towers, guy wires, or with each other. Or they may die from sheer exhaustion, especially if they are in migration and already vulnerable from the rigors of long flight.

Slaughter in the Skies

Some towers have resulted in catastrophic bird kills, as many as 10,000 in one night. Among the most striking is the account of a Wisconsin physician Charles Kemper, a bird enthusiast and past president of the Wisconsin Society for Ornithology. On the night of August 29, 1957, he reported in his ornithological journal the deaths of 10,000 birds at a tower in Eau Claire, Wisconsin.

"A lady living close to the tower noticed it was raining birds," he noted. "They were coming down on her roof, garage and lawn. Her neighbors reported the same phenomenon."

Local officials had many theories for the deaths: an avian plague, poisoning, electrocution. But Kemper concluded that the cause was stunningly simple: The birds were slamming into the tower. For the next 38 years, Kemper diligently conducted early-morning collections of dead birds and kept rigorous records. Now regarded as a citizen pioneer in the field of tower kill research, his work included records of 121,560 dead birds from 123 different species.

Another Midwestern kill on the night of January 22, 1998 reported up to 10,000 Lapland Longspurs dying at a "tower farm" in southwestern Kansas. This incident in particular helped to ignite recent interest in the tower problem. That same year, another pioneer in tower kill research

Migratory songbirds, such as the Henslow Sparrow (below), are most susceptible to tower kills. Partners in Flight has listed the Henslow, as well as some warblers, as being in serious decline.



JOCK R. BARTHOLOMEW

picked up the gauntlet and ratcheted up the focus on the issue. Bill Evans, a former Cornell ornithologist and specialist in night migration, launched a website — www.towerkill.com — and brought the issue to the forefront. The site helped to spearhead the movement and is a clearing-house for information on research, legislation, articles, state-by-state tower kill reports and personal accounts.

Evans has witnessed bird kills and has recorded birds colliding with acoustical equipment. The sound "struck me in my heart. It's an emotional thing ... when you hear hundreds of songbirds up there, smashing into each other ... They motivated me to study this [issue] more closely and try to do something about it."

Tower kills take their heaviest tolls among migratory songbirds, especially warblers and vireos. The Ovenbird, a delicate five-inch-long warbler, was cited as the species most often killed by towers. The ABC report lists the Red-eyed Vireo as the second most common species killed in the last 50 years and the Tennessee Warbler as third.

Among other reported species are several listed as being in serious decline by Partners in Flight, the international scientific organization that coordinates the monitoring of birds that migrate throughout the western hemisphere. Those species include the Swainson's Warbler, Cerulean Warbler, Bachman's Sparrow and Henslow's Sparrow. The once-abundant but now highly endangered Red-cockaded Woodpecker was also cited.

Lethal Latticework

Although the tallest and most powerful steel structures, called "megatowers" in the communications industry, kill more birds than other types of towers, there are numerous other tall structures that also kill birds, including electric and telephone line towers, power lines, skyscrapers and even modern-day wind mills, called wind turbines. In fact, the Fatal Light Awareness Program in Toronto claims that as many as 100 million birds die annually from collisions with hu-

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In September 2000, Jamie Rappaport Clark of the FWS answered the volley with a report stating that "the construction of new towers creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds." The report stated that some of the species affected are protected under the Endangered Species Act and the Migratory Bird Treaty Act and urged communications companies and broadcasters to adhere to the guidelines.

Solutions on the Horizon?

Among the FWS's guidelines were recommendations for lower heights, different lighting and tower designs with fewer guy wires, all of which may help reduce bird collisions. Limiting tower sites in sensitive areas was another option, as well as exploring the use of satellites to map tower positions and heights and ensure aviation safety.

These may be some fairly simple solutions, says Bill Evans, but he points out that more research is needed. Evans suggests another approach as well: "We have an \$800-plus-billion-a-year broadcasting industry, and they're going ahead building. There's a very striking lack of research. A couple of years of research could yield fairly simple solutions that could spare the unnecessary death of lots of birds." He hopes that broadcasters will come to the aid of birds and help underwrite the cost of such research.

In the meantime, as tower constructions increase in astronomical numbers and to dizzying heights, so too will avian mortality. It will be up to telecommunications companies, government agencies, bird experts and organizations and concerned citizens to shape an intelligent national policy that will ensure friendly skies for both birds and technology.

What Can You Do?

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