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Soap Box

Reprioritizing avian conservation efforts

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According to 2 recent studies, the number of birds killed annually by collisions with wind turbines in the continental United States is between 140,000 and 328,000 (Loss et al. 2013*a*) and between 214,000 and 368,000 in the United States and Canada combined (Erickson et al. 2014). Although these estimates clearly represent a substantial number of dead birds, when placed in the context of other human-related causes of bird mortality, it appears that avian conservation priorities should be reexamined. For example, each year in the United States an estimated 1.3 to 4 billion birds are killed by domestic cats (Loss et al. 2013*b*), 365 to 988 million by collisions with buildings (Loss et al. 2014*a*), 89 to 340 million by automobiles (Loss et al. 2014*b*), and 6.8 million by communication towers (United States and Canada combined; Longcore et al. 2012). In another study, Conover et al. (2013) summarized the number of birds killed in the United States by human activities and found that wind turbines ranked seventh of the 8 causes considered (only collisions with aircraft ranked lower). In that analysis, fewer birds were killed by wind turbines than by oil ponds, communication towers, power lines, windows, automobiles, and hunters (Conover et al. 2013). Relative estimates of bird mortality due to various human-related causes in Canada are similar to those in the United States (Calvert et al. 2013).

Although conservation efforts should not be prioritized only on class-level mortality estimates, these new data cannot be dismissed easily. Notwithstanding some degree of error likely present in such estimates, birds appear to face threats several orders of magnitude greater than collisions with wind turbines, in addition to less easily quantified but important causes of mortality, such as environmental toxins and habitat loss. Despite these trends, feral cat management tends to be guided by emotion rather than science (Longcore et al. 2009), and cat populations thrive. Also, compared to bird–turbine collisions (Loss et al. 2013*a*, Erickson et al. 2014), relatively little consideration is given to the development and implementation of mitigation methods to reduce bird collisions with vehicles and other structures (Figure 1). For example, despite the prevalence of bird–vehicle collisions and their impacts on populations (Kociolek et al. 2011), we understand little of the fundamental causes of such collisions (DeVault et al. 2015, Lima et al. 2015).

Figure 1. The fundamental causes of bird–vehicle collisions are largely unexplored. Even species familiar with traffic, like this turkey vulture (*Cathartes aura*), are often struck and killed by cars. (*Photo courtesy Travis L. DeVault*)

I do not advocate that bird–turbine collisions should be ignored. Caution is warranted when establishing new wind farms, especially where rare, declining, or long-lived species are at risk

(Carrete et al. 2009). Research on turbine design and placement to reduce collisions should continue. However, when the potential for bird collisions with turbines serves as a roadblock for wind-energy development, the offsetting benefits of reduced carbon emissions as renewable energy replaces fossil fuels should not be discounted. Birds face far more serious threats overall than wind turbines, especially by cats, automobiles, and other structures, and these issues should be regarded with more urgency. Management and policy discussions should consider the potential impacts of human activities on birds, practicality of mitigation methods, valuations of wind-energy benefits, and lost ecosystem services (Wenny et al. 2011) through bird mortality.

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