

A Century of Change: Bird Communities of Illinois, 1906-1909, 1956-1958 and 2006-2008

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From 1906-1909, Stephen Forbes, Alfred Gross and Howard Ray conducted one of the first quantitative bird surveys in North America, documenting the numbers of all species they observed in habitats across Illinois. Richard and Jean Graber repeated the study from 1956-1958, and we replicated their efforts from 2006-2008.

Just as Illinois is now dominated by a few land cover types, the bird community has become highly skewed towards a few generalist species; four birds (Red-winged Blackbirds, European Starlings, American Robins and Common Grackles) comprised more than half of all birds we recorded. Shrubland and grassland birds, which were the most common birds seen in the 1900s, have declined the most over the past 50 years, and forest communities have changed the least.

Although changes in the amount and quality of habitat are the most important factors driving changes in bird populations, environmental pollution in the 1950s and adaptation of several birds have produced interesting patterns of “winners” and “losers” over time.

Climate change research predicts birds may shift their ranges northward over the next century, but about the same number of species shifted north and south over the past century. Only a few birds found during the 1900s and 1950s were ‘missed’ during recent surveys, whereas we recorded many more species that were absent in the past, including Bald Eagles, Canada Geese, Wood Ducks, Wild Turkeys, and introduced House Finches and Eurasian Collared-doves.