North American Breeding Bird Survey

About BBS

What is the North American Breeding Bird Survey (BBS)?
The BBS is a long-term, large-scale, international avian monitoring program initiated in 1966 to track the status and trends of North American bird populations. The USGS Patuxent Wildlife Research Center and the Canadian Wildlife Service, National Wildlife Research Center jointly coordinate the BBS program.

Why was the BBS created?
In the mid-twentieth century, the success of DDT as a pesticide ushered in a new era of synthetic chemical pest control. As pesticide use grew, concerns, as epitomized by Rachel Carson in *Silent Spring*, regarding their effects on wildlife began to surface. Local studies had attributed some bird kills to pesticides, but it was unclear how, or if, bird populations were being affected at regional or national levels. Responding to this concern, Chandler Robbins and colleagues at the Patuxent Wildlife Research Center developed the North American Breeding Bird Survey to monitor bird populations over large geographic areas.

Although most concerns over pesticide use in North America have subsided in recent decades, bird populations continue to be subjected to numerous widespread threats including habitat loss, habitat fragmentation, land-use changes, and other chemical contaminants. Today, the BBS continues to monitor bird populations across North America and informs researchers and wildlife managers of significant changes in bird population levels. If significant declines are detected, their causes can then be identified and appropriate actions taken to reverse them before populations reach critically low levels.

How does the BBS work?
Each year during the height of the avian breeding season, June for most of the U.S. and Canada, participants skilled in avian identification collect bird population data along roadside survey routes. Each survey route is 24.5 miles long with stops at 0.5-mile intervals. At each stop, a 3-minute point count is conducted. During the count, every bird seen within a 0.25-mile radius or heard is recorded. Surveys start one-half hour before local sunrise and take about 5 hours to complete. Over 4100 survey routes are located across the continental U.S. and Canada.

Once analyzed, BBS data provide an index of population abundance that can be used to estimate population trends and relative abundances at various geographic scales. Trend estimates for more than 420 bird species and all raw data are currently available via the BBS web site.

How are BBS data used?

1. The U.S. Fish and Wildlife Service, Canadian Wildlife Service, and Partners in Flight all use BBS trends along with other indicators to assess bird conservation priorities.
2. BBS data were instrumental in focusing research and management action on neotropical migrant species in the late 1980s, and on grassland species in the mid-1990s.
3. State Natural Heritage programs and Breeding Bird Atlas projects often utilize BBS

data to enrich their databases.

4. Educators often use BBS data as a tool to teach biological, statistical and GIS concepts.
5. More than 450 scientific publications have relied heavily, if not entirely, on BBS data. The entire BBS bibliography is viewable inPDF format or in field-searchable web format.

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